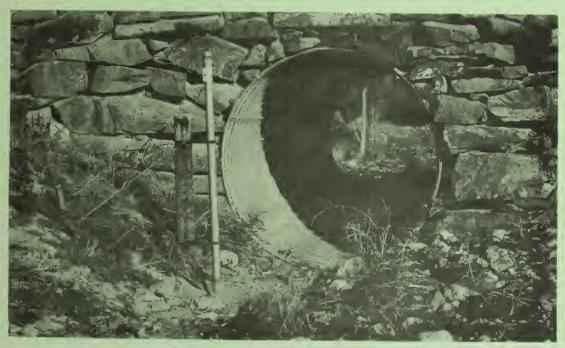
1968

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

# ANNUAL PEAK DISCHARGES FROM SMALL DRAINAGE AREAS IN MONTANA

Through September 1967



Prepared in cooperation with the MONTANA STATE HIGHWAY COMMISSION and

U. S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

Helena, Montana March 1968

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# UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

ANNUAL PEAK DISCHARGES FROM SMALL DRAINAGE AREAS IN MONTANA THROUGH SEPTEMBER 1967

by M. V. Johnson

Prepared in cooperation
with the
Montana State Highway Commission
and the
U. S. Department of Commerce, Bureau of Public Roads

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# ANNUAL PEAK DISCHARGES FROM SMALL DRAINAGE AREAS IN MONTANA THROUGH SEPTEMBER 1967

M. V. Johnson

#### INTRODUCTION

A cooperative program to investigate the magnitude and frequency of floods from small drainage areas in Montana was begun July 1, 1955. The original agreement was for the establishment of and collection of data at 45 crest-stage gaging stations. The program was expanded to 138 gaging stations in 1959 and to 202 gaging stations in 1963. Although some stations have been dropped from the network, others have been added to keep about 200 stations in operation since 1963. The investigation is financed through an agreement between the Montana State Highway Commission and the U. S. Geological Survey which provides for the full reimbursement of appropriate costs by the Highway Commission Planning Survey. The U. S. Bureau of Public Roads cooperates in the program by reimbursing the Highway Commission for approximately three-fourths of the total program costs.

This is the thirteenth annual report prepared to inform the cooperators and other interested parties of the status of the program. The report is primarily a tabulation, by water year, of the annual peak stage and discharge at each crest-stage gaging station. It also summarizes the activities and progress made during the 1967 water year.

Data on outstanding flood events and streamflow at sites where crest-stage gages are not operated are furnished on request to Mr. Donald D. Gruel, Hydrologist, Montana State Highway Commission.

#### PURPOSE OF THE PROGRAM

The primary purpose of the program is to define the magnitude and frequency of floods, on a regional basis, for Montana. Hydrologic data on small drainage areas are being collected to supplement the data obtained from the established cooperative stream-gaging program of the Geological Survey. The ultimate objective of the program is to obtain sufficient information on the magnitude and frequency of floods from various sizes and types of drainage basins to design appropriate highway drainage structures.

#### PROGRAM OPERATION

Equipment at a crest-stage gaging station consists of one or more standard Geological Survey crest-stage gages. These gages are designed to record the maximum stage reached by the water surface at the gaging station site. Many crest-stage gaging stations are located at highway culverts because the culvert can be used as a convenient tool for measuring peak discharge. Given the shape of the natural channel in

the vicinity of the culvert, the culvert geometry, and the water-surface profile upstream and downstream from the culvert at the time of the peak flow, the peak discharge can be computed. The water-surface profile, obtained from marks recorded on the crest-stage gages, is usually supplemented by nearby high-water marks along the stream channel.

Nine continuous-record gaging stations, formerly operated through other cooperative agreements, have been operated for this program. These stations are an important supplement to the crest-stage network because they provide data for establishing the dates of peaks at crest-stage sites and comparison between the magnitude of peaks recorded during the present period of data collection and peaks recorded prior to the start of the program. Climatological data published by the U.S. Weather Bureau are also used to determine the dates of occurence of peak discharges.

Since 1955, peak flow data have been obtained for various periods at 214 different sites. At the beginning of the 1967 water year there were 201 gages in operation. During the year several gages were destroyed by road construction or damaged by floods, but were repaired or replaced. The approximate location and the status of each station is shown on figure 1.

The gaging stations are located to provide information on drainage areas that range in size from less than one square

mile to several hundred square miles and represent various hydrologic conditions. The network has 25 stations with drainage areas of less than one square mile, 102 stations from 1 to 10 square miles, 54 stations from 10 to 50 square miles, and 20 stations with more than 50 square miles.

In addition to the stations operated in cooperation with the Highway Commission, the Geological Survey maintains 14 crest-stage gaging stations in eastern Montana in cooperation with the Montana State Water Resources Board. These stations are included in this report.

#### PROGRAM ACTIVITIES, 1967 WATER YEAR

Operation of the crest-stage gages for the purpose of recording peak stages continued to be the primary phase of work. To insure proper gage operation, periodic visits were made to service the gages and record the peak stages that had occurred between visits. Changes in channel, culvert, and control conditions were also noted. Additional visits were necessary during the spring snowmelt period to determine the effects of backwater caused by snow and ice in the stream channels. During the 1967 water year many peak flows of relatively large magnitude occurred. The previous maximum of record was equaled or exceeded at 21 crest-stage gage sites. Thirteen transit-stadia surveys were made for indirect determination of peak discharges. Current-meter measurements of

streamflow were made at high stages at many sites. The stage-discharge relation at critical points at some sites was defined. This enabled computation of some peak flows that previously were listed as "not determined."

A level circuit between the gage and several semi-permanent reference marks was run at each gage to insure that all flood peaks at a station can be adjusted to the same datum although a gage may be disturbed or destroyed.

A flood-frequency report (Magnitude and frequency of floods from drainage areas less than 100 square miles in Montana by F. C. Boner and R. J. Omang) was released to the open file. It is useful in determining the magnitude of floods having 10- and 25-year recurrence intervals at any site with a drainage area of less than 100 square miles in Montana.

#### PROGRAM PLANS, 1968 WATER YEAR

The collection of peak-flow data will continue as the principal activity during the year. Routine inspections, with special visits when necessary, will be made as in previous years. A report summarizing peak-flow data collected through September 30, 1968, is planned for publication by March 1969.

A reduction in funds available for the program necessitated cutting the crest-stage gage network to 185 stations. The 16 stations discontinued as of September 1967 should have the least

effect on the overall program. Criteria used in deciding which stations to discontinue were 1) length of record, 2) stability of control conditions, and 3) changes in runoff pattern.

The 14 crest-stage stations presently operated in cooperation with the Montana Water Resources Board will be continued. Information on floods at points where gaging stations are not operated will be obtained where significant damage is reported or where the peak discharge may be hydrologically significant. The resources of the Geological Survey do not permit coverage of all reported events, and it is acknowledged that some may escape attention.

#### PRESENTATION OF DATA

All stations, active and discontinued, are described on pages 9 to 132 in a downstream order. Those in the Missouri River basin (Part 6) are listed first and those in the Columbia River basin (Part 12) follow. Each station description includes the name, permanent station number (in parentheses following name), location, drainage area, period of record, type of gage, and altitude of gage. Following the description, the annual maximum gage height (or stage) and discharge (when available) is listed for each water year of record. The date given for each annual peak is as near the actual day on which the peak flow occurred as can be determined from available data.

The annual peak discharges shown are preliminary figures and are subject to revision. If a peak discharge is listed as "not determined" it means that a peak discharge will be determined when the stage-discharge relation has been defined by discharge measurements. A listing of "unknown" means a reliable figure of peak discharge will never be available.



#### STATION DATA

#### MISSOURI RIVER BASIN

#### 1. Long Creek near Lakeview, Mont. (6-0114)

Location. -- Lat 44°43', long 112°04', in SE½ sec.10, T.13 S., R.4 W., at bridge on county road, 15 miles northwest of Lakeview.

Drainage area. -- 33.9 sq mi.

Records available. -- May 1959 to September 1967 (discontinued).

Gage. -- Crest-stage gage installed May 12, 1959. Altitude of gage is 6,800 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           | Apr. 6, 1960  | 3.17             | 235             |
| 1961           | Apr. 17, 1961 | 1.00             | 48              |
| 1962           | Apr. 27, 1962 | 3.42             | 265             |
| 1963           | June 14, 1963 | 1.54             | 83              |
| 1964           | May 14, 1964  | 2.72             | 196             |
| 1965           | Apr. 29, 1965 | 2.48             | 178             |
| 1966           | Apr. 11, 1966 | 1.86             | 128             |
| 1967           | May 11, 1967  | 2.23             | 140             |
|                |               |                  |                 |

#### 2. Red Rock River tributary near Monida, Mont. (6-0119)

Location. -- Lat 44°35', long 112°15', in SE½ sec.30, T.14 S., R.5 W., at county road, 3 miles east of Monida.

Drainage area .-- 1.00 sq mi.

Records available. -- May 1959 to September 1967 (discontinued).

Gage.--Crest-stage gage installed May 12, 1959. Altitude of gage is 6,750 ft (from topographic map).

| Annual maximum | data          | -                    |                 |
|----------------|---------------|----------------------|-----------------|
| Water year     | Date          | Gage height (ft)     | Discharge (cfs) |
| 1960           | Apr. 6, 1960  |                      | a 3             |
| 1961           | Apr. 17, 1961 | b 1.08               | a 2             |
| 1962           | Apr. 19, 1962 | b 2.7 <sup>1</sup> + | a 15            |
| 1963           | April 1963    | 01                   | 1               |
| 1964           | Apr. 29, 1964 | b 3.20               | a 10            |
| 1965           | Apr. 24, 1965 | ъ 3.76               | a 2             |
| 1966           | Apr. 12, 1966 | b 3.58               | a 5             |
| 1967           | May 11, 1967  | b 3.10               | a 5             |
|                |               |                      |                 |

a About.

b Backwater from ice.

#### 3. Traux Creek near Lima, Mont. (6-0132)

Location. -- Lat 44°37', long 112°34', in NW sec.15, T.14 S., R.8 W., at culvert 300 ft upstream from Interstate Highway 15 and U.S. Highway 91, 2 miles southeast of Lima.

Drainage area. -- 2.77 sq mi. Records available. -- May 1959 to

Gage .-- Crest-stage gage installed May 12, 1959. Altitude of gage is 6,350 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           | March 1960    | 0.24             | Not determined  |
| 1961           | Mar. 14, 1961 | •35              | Not determined  |
| 1962           | Apr. 19, 1962 | .85              | Not determined  |
| 1963           | March 1963    |                  | <1              |
| 1964           | April 1964    | .06              | Not determined  |
| 1965           | Apr. 1, 1965  | •75              | Not determined  |
| 1966<br>1967   | Mar. 29, 1966 | 71               | <1              |
| 1967           | July 30, 1967 | 59               | <1              |
|                |               |                  | \ _             |

#### 4. Muddy Creek near Dell, Mont. (6-0134)

Location. -- Lat 44°38', long 112°48', in SW4 sec.3, T.14 S., R.10 W., half a mile upstream from mouth, 8 miles southwest of Dell.

Drainage area. -- 62.7 sq mi. Records available .-- May 1959 to

Gage .-- Crest-stage gage installed May 12, 1959. Altitude of gage is 6,570 ft (from topographic map).

| Annual maximum data  Water year  1960  1960  1961  Apr. 3, 1961  1962  Apr. 2, 1962  Gage height (ft)  2.70  85  2.47  68  3.72  197 |                 |                |                      |                |
|--|-----------------|----------------|----------------------|----------------|
| 1960 July 6, 1960 2.70 85<br>1961 Apr. 3, 1961 2.47 68   |                 |                | data                 | Annual maximum |
| 1961 Apr. 3, 1961 2.47 68  | Discharge (cfs) | ge height (ft) | <u>Date</u> <u>G</u> | Water year     |
|  | 85              |                | July 6, 1960         | 1960           |
| 1962 Apr. 2, 1962 3.72 197   | 68              | 2.47           | Apr. 3, 1961         |                |
|  | 197             |                | Apr. 2, 1962         | 1962           |
| 1963 June 7, 1963 1.22 14  | 14              | 1.22           | June 7, 1963         | 1963           |
| 1964 May 15, 1964 · 2.47 68  | 68              | 2.47           | May 15, 1964         | 1964           |
| 1965 Apr. 1, 1965 3.83 112   | 112             | 3.83           | Apr. 1, 1965         | 1965           |
| 1966 Mar. 30, 1966 b 2.70 a 40   | a 40            | ъ 2.70         | Mar. 30, 1966        | 1966           |
| 1967 June 11, 1967 1.97 25   | 25              | 1.97           | June 11, 1967        | 1967           |

a About.

b Backwater from ice.

5. Sheep Creek below Muddy Creek, near Dell, Mont. (6-0135)

Location. -- Lat 44°39', long 112°47', in  $SE_{\frac{1}{4}}$  sec. 35, T.13 S., R.10 W.,  $6\frac{1}{2}$  miles southwest of Dell.

Drainage area. -- 280 sq mi. At site in 1936, 293 sq mi.

Records available. -- April to September 1936 and May 1946 to September 1953 (continuous record), June 1959 to

Gage. -- Water-stage recorder re-installed June 24, 1959. Altitude of gage is 6,530 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                  |
|----------------|---------------|------------------|------------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs)  |
| 1936           |               |                  | Unknown          |
| 1946           | May 28, 1946  | 5.54             | 3,79             |
| 1947           | June 9, 1947  | 5.66             | 349              |
| 1948           | Aug. 1, 1948  | 5.49             | 369              |
| 1949           | Apr. 12, 1949 | 6.02             | <del>\\</del> 77 |
| 1950           | Apr. 1, 1950  | 5.68             | 406              |
| 1951           | Aug. 4, 1951  | 4.82             | 234              |
| 1952           | Apr. 18, 1952 | 7.72             | 909              |
| 1953           | June 2, 1953  | 5•23             | 313              |
| 1960           | Mar. 26, 1960 | 4.44             | 168              |
| 1961           | Apr. 4, 1961  | 3.98             | 84               |
| 1962           | Apr. 2, 1962  | 4.83             | 236              |
| 1963           | June 15, 1963 | 5.38             | 343              |
| 1964           | June 10, 1964 | 6.06             | 491              |
| 1965           | Apr. 21, 1965 | 2.43             | 354              |
| 1966           | Apr. 2, 1966  | 4.29             | 7.55             |
| 1967           | June 11, 1967 | 5.48             | 365              |

#### 6. Sage Creek tributary near Dell, Mont. (6-0139)

Location. -- Lat 44°44', long 112°37', in SE1 sec.31, T.12 S., R.8W., at bridge on county road, 4 miles east of Dell.

Drainage area. -- 0.43 sq mi.

Records available. -- May 1959 to September 1967 (discontinued).

Gage. -- Crest-stage gage installed May 12, 1959. Altitude of gage

is 6,300 ft (from topographic map).

| Ammual | maximum da | <u>16a</u>     |             |                |         |
|--------|------------|----------------|-------------|----------------|---------|
| Wate   | r year     | Date           | Gage height | (ft) Discharge | e (cfs) |
| 1      | .960       | March 1960     | b 0.13      | <1             |         |
| 1      | .961       | September 1961 |             | <1             |         |
| 1      | .962       | Apr. 2, 1962   | b.92        | <1             |         |
| 1      | .963       | March 1963     |             | <b>&lt;</b> 1  |         |
| 1      | .964       | April 1964     | ъ.50        | <1             |         |
|        | .965       | April 1965     | b .72       | <1             |         |
| 1      | .966       |                |             | (c)            |         |
| 1      | 967        | July 18, 1967  | 1.05        | <1             |         |
|        |            | •              |             |                |         |

b Backwater from ice.

c No evidence of flow during year.

#### 7. Grasshopper Creek near Dillon, Mont. (6-0155)

Location. -- Lat 45°06'40", long 112°48'00" in SW NW sec. 26, T.8 S., R.10 W., on left bank 1 miles upstream from mouth and 11 miles southwest of Dillon.

Drainage rea. -- 348 sq mi.

Records available. -- March 1921 to September 1929, April 1930 to June 1933, October 1945 to December 1953, March 1955 to September 1958, October 1959 to September 1961 (continuous record), October 1961 to

Gage. -- Crest-stage gage installed Oct. 11, 1961. Water-stage recorder, chain or staff gages prior to October 1961. Altitude

of gage is 5,350 ft (from topographic map).

| Annual maximum | <u>data</u>  |                  |                  |
|----------------|--|------------------|------------------|
| Water year     | <u>Date</u>  | Gage height (ft) | Discharge (cfs)  |
| 1921           | June 10, 1921  | 6.60             | d 516            |
| 1922           | May 28, 1922<br>June 23, 1923  | 6.48             | d 543<br>d 283   |
| 1923           | June 23, 1923  | 5.68             | d 283            |
| 1924           | Apr. 13, 1924  | 5.68<br>5.05     | d 120            |
| 1925           | June 5, 1925   | 6.52             | d 557            |
| 1926           | July 8, 1926   | 6.52<br>5.52     | d 197            |
| 1927           | Apr. 13, 1924<br>June 5, 1925<br>July 8, 1926<br>June 12, 1927<br>May 13, 1928 | 6.2<br>6.10      | d 197<br>d 355   |
| 1928           | May 13, 1928   | 6.10             | d 327            |
| 1929           | June 18, 1929  | 5.45             | d 172            |
| 1930           |  |                  | Unknown          |
| 1931           | Apr. 4, 1931   | 5.02             | d 85             |
| 1932           | June 7, 1932   | 6.06             | d 322            |
| 1933           |  |                  | Unknown          |
| 1946           | May 29, 1946   | 2.78             | 160              |
| 1947           | Mass 77 7017   | 1: 1+1+          | 640              |
| 1948           | June 4, 1948  June 2, 1949  June 23, 1950  Mar. 22, 1951  May 16, 1952         | 4.51             | 719              |
| 1949           | June 2, 1949   | 3.46<br>3.22     | 324              |
| 1950           | June 23, 1950  | 3.22             | 252              |
| 1951           | Mar. 22, 1951  | 4.11             | 559              |
| 1952           | May 16, 1952   | 3.20             | 257              |
| 1953           | June 3, 1953   | 4.51             | 719              |
| 1954           |  |                  | Unknown          |
| 1955           | June 30, 1955  | 3·39<br>6·47     | 328              |
| 1956           | Mar. 24, 1956  | 6.47             | 1,870            |
| 1957           | May 21, 1957   | 3.75             | <sup>1</sup> +33 |
| 1958           | June 5, 1958   | 4.16             | 579              |
| 1959           | <br>25 05 50/0   |                  | Unknown          |
| 1960           | Mar. 25, 1960  | 4.06             | 539              |
| 1961           | June 14, 1961  | 3.14             | 252              |
| 1962           | Mar. 27, 1962  | 3.83             | 450              |
| 1963           | Feb. 3, 1963   | b 4.61           | 465              |
| 1964           | June 9, 1964   | 4.16             | 539              |
| 1965           | July 1, 1965   | 4.82             | 635              |
| 1966           | Mar. 30, 1966  | 3.02             | 180              |
| 1967           | June 11, 1967  | 5.17             | 730              |

b Backwater from ice. d Maximum observed.

8. Beaverhead River tributary near Dillon, Mont. (6-0169)

Location. -- Lat 45°13', long 112°40', in SE½ sec.15, T.7 S., R.9 W., 250 ft upstream from settling basin, 2 miles west of Dillon.

Drainage area. -- 0.62 sq mi. Records available. -- May 1959 to

Gage.--Crest-stage gage installed May 11, 1959. Altitude of gage is 5,250 ft (from topographic map).

| Annual maximum | <u>aata</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           | Mar. 18, 1960 | 0.32             | a 3             |
| 1961           | -             |                  | (c)             |
| 1962           | Feb. 2, 1962  | .02              | a 2             |
| 1963           | Feb. 3, 1963  | .20              | a 11            |
| 1964           |               |                  | (c)             |
| 1965           | Mar. 30, 1965 | 51               | 0.1             |
| 1966           | Sept. 4, 1966 | 41               | Not determined  |
| 1967           | June 11, 1967 | •37              | a 15            |
|                |               |                  |                 |

9. Beaverhead River tributary No. 2 near Dillon, Mont. (6-0182)

Location. -- Lat 45°19', long 112°32', in NW sec.13, T.6 S., R.8 W., at culvert on State Highway 41, 9 miles northeast of Dillon.

Drainage area. -- 0.40 sq mi.

Records available. -- May 1959 to September 1965 (discontinued).

Gage. -- Crest-stage gage installed May 7, 1959. Altitude of gage

is 4,970 ft (from topographic map).

| Annual maximum | data            |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs) |
| 1958           | e June 24, 1958 | 5.04             | 170             |
| 1959           |                 |                  | (c)             |
| 1960           | Mar. 19, 1960   | <u>.</u> 41      | 3               |
| 1961           | June 12, 1961   | 36               | 2.5             |
| 1962           |                 |                  | (c)             |
| 1963           | Sept. 2, 1963   | •30              | 2               |
| 1964           | June 27, 1964   | .29              | 2               |
| 1965           | August 1965     | • 4O ·           | 3               |
| •              | _ , ,           |                  |                 |

a About.

c No evidence of flow during year.

e Prior to installation of gage; peak discharge computed from highwater marks along highway embankment at culvert.

#### 10. Idaho Creek near Alder, Mont. (6-0198)

Location. -- Lat 45°12', long 112°08', in center sec.30, T.7 S., R.4 W., at bridge on county road, 9 miles south of Alder.

D-ainage area. -- 10.8 sq mi. Records available. -- May 1959 to

Gage.--Crest-stage gage installed May 7, 1959. Altitude of gage is 5,420 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           | Mar. 27, 1960 | b 2.18           | a 40            |
| 1961           | Apr. 4, 1961  | .87              | 13              |
| 1962           | Apr. 25, 1962 | 2.30             | 90              |
| 1963           | Mar. 22, 1963 | 1.36             | 24              |
| 1964           | July 29, 1964 | 1.20             | 17              |
| 1965           | Mar. 30, 1956 | b 3.01           | a 60            |
| 1966           | June 10, 1966 | .80              | 8               |
| 1967           | June 15, 1967 | 1.34             | 9               |

#### 11. Moose Creek near Divide, Mont. (6-0253)

Location. -- Lat 45°43', long 112°42', in NW sec. 34, T.1 S., R.9 W., at culverts on Interstate Highway 15 and U. S. Highway 91, 3½ miles southeast of Divide.

Drainage area. -- 41.4 sq mi.

Records available. -- May 1959 to

Gage. -- Crest-stage gage installed May 11, 1959. Altitude of gage is 5,430 ft (from topographic map).

| Annual maximum | <u>data</u>     |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs) |
| 1960           | May 7, 1960     | 1.62             | 90              |
| 1961           | Apr. 4, 1961    | •79              | 39              |
| 1962           | Apr. 19, 1962 . | 1.89             | 108             |
| 1963           | May 22, 1963    | 2.66             | 165             |
| 1964           | June 8, 1964    | 1.41             | 77              |
| 1965           | June 17, 1965   | 2.06             | 122             |
| 1966           | Mar. 30, 1966   | 1.20             | 64              |
| 1967           | June 11, 1967   | 2.60             | 180             |

a About.

b Backwater from ice.

Location. -- Lat 45°46', long 112°15', in NW4 sec.8, T.1 S., R.5 W., at bridge on county road, 6 miles north of Silverstar.

Drainage area. -- 39.5 sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 7, 1959. Altitude of gage is

4,790 ft (from topographic map).

| Annual maximum | <u>aata</u>   |                  | •               |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1959           | June 6, 1959  | 1.15             | 166             |
| 1960 .         | May 13, 1960  | .91              | 105             |
| 1961           | Apr. 4, 1961  | 1.13             | 160             |
| 1962           | June 3, 1962  | •95              | 115             |
| 1963           | June 11, 1963 | 1.16             | 141             |
| 1964           | June 19, 1964 | b 1.49           | 150             |
| 1965           | June 16, 1965 | 1.74             | 220             |
| 1966           | May 2, 1966   | .67              | 54              |
| 1967           | June 11, 1967 | 1.78             | 228             |

#### 13. Jefferson River tributary near Whitehall, Mont. (6-0302)

Location. -- Lat 45°53', long 112°00', in SE4 sec.32, T.2 N., R.3 W., at culvert on Interstate Highway 90 and U. S. Highway 10, 5 miles east of Whitehall.

<u>Drainage area.--1.85</u> sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 6, 1959. Altitude of gage is 4,340 ft (from topographic map).

| Annual maximum d | <u>lata</u> |          |      |             |                 |
|------------------|-------------|----------|------|-------------|-----------------|
| Water year       |             | Date     | Gage | height (ft) | Discharge (cfs) |
| 1960             |             |          |      |             | (c)             |
| 1961             |             |          |      |             | (c)             |
| 1962             | Aug.        | 29, 1962 | •    | a 0.2       | 3               |
| 1963             | Feb.        | 2, 1963  |      | 1.03        | 17              |
| 1964             | Aug.        | 19, 1964 |      | .97         | 16              |
| 1965             | Aug.        | 22, 1965 |      | 1.21        | 22              |
| 1966             |             | ,,       |      | '           | (c)             |
| 1967             | June        | 22, 1967 |      |             | a i             |
| - / - /          |             | , _, _,  |      |             |                 |

a About.

b Backwater from ice or debris.

c No evidence of flow during year.

## 14. Jefferson River tributary No. 2 near Whitehall, Mont. (6-0303)

Location. -- Lat 45°53', long lll°59', in SE½ sec.33, T.2 N., R.3 W., at culvert on State Secondary Highway 281, 6 miles east of Whitehall.

Drainage area. -- 4.50 sq mi.

Records available. -- October 1957 to

Gage. -- Crest-stage gage installed May 7, 1959. Altitude of gage is 4,400 ft (from topographic map).

| Annual maximum | <u>data</u>     |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | <u>Date</u>     | Gage height (ft) | Discharge (cfs) |
| 1958           | e June 24, 1958 | 4.45             | 169             |
| 1959           | e Apr. 6, 1959  | 2.37             | 71              |
| 1960           | <u>-</u> -      |                  | (c)             |
| 1961           | Sept. 11, 1961  | 1.32             | 34              |
| 1962           |                 |                  | (c)             |
| 1963           | Feb. 2, 1963    | 1.38             | 39              |
| 1964           | June 8, 1964    | 0.41             | 10              |
| 1965           | Aug. 22, 1965   | •30              | 8               |
| 1966           |                 |                  | (c)             |
| 1967           | July 18, 1967   | •37              | 9               |

#### 15. Sand Creek at Sappington, Mont. (6-0347)

Location. -- Lat 45°47', long lll°45', in SW sec. 32, T.1 N., R.1 W., three quarters of a mile southeast of Sappington.

Drainage area. -- 9.41 sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 6, 1959. Altitude of gage is 4,240 ft (from topographic map).

| Annual maximum | <u>data</u> . | -        |                   |                 |
|----------------|---------------|----------|-------------------|-----------------|
| Water year     |               | Date     | Gage height (ft)  | Discharge (cfs) |
| 1960           | Apr.          | 9, 1960  | 1.36              | 50              |
| 1961           | Aug.          | 14, 1961 | (OG) 2.0          | 124             |
| 1962           | Aug.          | 25, 1962 | 5• <sup>1</sup> + | 2,130           |
| 1963           | Feb.          | 3, 1963  | . 2.73            | 380             |
| 1964           |               |          |                   | (c)             |
| 1965           | Aug.          | 22, 1965 | 1.16              | 105             |
| 1966           | July          | 3, 1966  | .87               | 80              |
| 1967           |               |          |                   | (c)             |

c No evidence of flow during year.

e Prior to installation of gage.

# 16. Jefferson River tributary No. 3 near Sappington, Mont. (6-0348)

Location. -- Lat 45°50', long lll°42', in SW sec. 14, T.1 N., R.1 W., at culvert on Interstate Highway 90 and U. S. Highway 10, 4 miles northeast of Sappington.

Drainage area. -- 1.14 sq mi.

1965

1966

1967

Records available .-- May 1959 to

April 1965

July 3, 1966

Gage.--Crest-stage gage installed May 6, 1959. Altitude of gage is 4,200 ft (from topographic map).

| Annual maximum | data    | _    | _           |      |           |       |
|----------------|---------|------|-------------|------|-----------|-------|
| Water year '   | Da      | ate  | Gage height | (ft) | Discharge | (cfs) |
| 1960           | Feb. 1, | 1960 | 0.10        |      | 0.1       |       |
| 1961           | Aug. 14 | 1961 | • 95        |      | 12        |       |
| 1962           | Mar. 6, | 1962 | .65         |      | 6         |       |
| 1963           | Feb. 2, | 1963 | b 3.43      |      | a50       |       |
| 1964           |         | -    |             |      | (c)       |       |

0.16

4.09

<0.5

96 (c)

17. Jefferson River tributary No. 4 near Three Forks, Mont. (6-0366)

Location. -- Lat 45°54', long lll°37', in SW4 sec.28, T.2 N., R.1 E., at culverts on Interstate Highway 90 and U. S. Highway 10, 3 miles west of Three Forks.

Drainage area. -- 0.53 sq mi.
Records available -- May 1959

Records available. -- May 1959 to

Gage. -- Crest-stage gage installed May 6, 1959. Altitude of gage is 4,140 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           |               |                  | (c)             |
| 1961           |               | ·                | (c)             |
| 1962           | Mar. 6, 1962  | b 0.75           | a 3             |
| 1963           | Feb. 2, 1963  | •74              | a 7             |
| 1964           | Aug. 19, 1964 | .62              | a 6             |
| 1965           | February 1965 | .18              | a 1.5           |
| 1966           | July 3, 1966  | •73              | 7               |
| 1967           | Aug. 5, 1967  | .62              | <b>a</b> 6      |
|                |               |                  |                 |

a About.

b Backwater from ice.

c No evidence of flow during year.

# 18. Jefferson River tributary No. 5 near Three Forks, Mont. (6-0367)

Location. -- Lat 45°55', long lll°36', in NE4 sec.21, T.2 N., R.1 E., at culvert on State Highway 287, 3 miles west of Three Forks.

<u>Drainage area.--3.69</u> sq mi. <u>Records available.--May 1959</u> to

Gage.--Crest-stage gage installed May 6, 1959. Altitude of gage is 4,120 ft (from topographic map).

| Annual maximum | data                         |                  |                 |
|----------------|------------------------------|------------------|-----------------|
| Water year     | Date                         | Gage height (ft) | Discharge (cfs) |
| 1960           | prome states                 |                  | (c)             |
| 1961           |                              | Code ann         | (c)             |
| 1962           | Mar. 6, 1962                 | 0.61             | 28              |
| 1963           | Mar. 6, 1962<br>Feb. 2, 1963 | .61              | 28              |
| 1964           |                              |                  | (c)             |
| 1965           | Aug. 22, 1965                | 2.56             | 153             |
| 1966           | July 3, 1966                 | -0.04            | 6               |
| 1967           |                              | -                | (c)             |

#### 19. Squaw Creek near Gallatin Gateway, Mont. (6-0432)

Location. -- Lat 45°26', long lll°13', in SW4 sec. 34, T.4 S., R.4 E., at private bridge, 10 miles south of Gallatin Gateway.

<u>Drainage area</u>.--40.4 sq mi. <u>Records available</u>.--May 1959 to

Gage. -- Crest-stage gage installed May 5, 1959. Altitude of gage is 5,400 ft (from topographic map).

| Annual maximum | <u>aata</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1959           | June 7, 1959  | 2.20             | a 420           |
| 1960           | May 12, 1960  | 1.66             | 147             |
| 1961           | May 26, 1961  | 1.47             | 200             |
| 1962           | June 13, 1962 | 1.34             | 168             |
| 1963           | June 15, 1963 | 1.49             | 208             |
| 1964           | June 8, 1964  | 1.44             | 195             |
| 1965           | June 15, 1965 | 1.87             | 320             |
| 1966           | May 6, 1966   | 1.08             | 136             |
| 1967           | May 24, 1967  | 1.30             | 222             |
|                | •             |                  |                 |

a About.

c No evidence of flow during year.

Location. -- Lat 45°27', long lll°14', in SW4 sec.28, T.4 S., R.4 E., at culvert on U. S. Highway 191, 10 miles south of Gallatin Gateway.

Drainage area. -- 2.48 sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 5, 1959. Altitude of gage is 5,340 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1959           | June 7, 1959  | 1.03             | 20              |
| 1960           | May 12, 1960  | •69              | 9               |
| 1961           | May 26, 1961  | •34              | 6               |
| 1962           | June 13, 1962 | •73              | 18              |
| 1963           | May 27, 1963  | •38              | 11              |
| 1964           | June 8, 1964  | 1.09             | 25              |
| 1965           | June 15, 1965 | .66              | 18              |
| 1966           | May 6, 1966   | .08              | 5               |
| 1967           | June 22, 1967 | •50              | 16              |
|                |               |                  |                 |

#### 21. East Gallatin River near Bozeman, Mont. (6-0465)

Location. --Lat  $45^{\circ}39'$ , long  $110^{\circ}57'$ , in  $NE\frac{1}{4}$  sec. 23, T.2 S., R.6 E., 5 miles east of Bozeman.

Drainage area. -- 49.0 sq mi at site 14 miles upstream.

Records available. --November 1951 to September 1953 (continuous record), 1956-57 (miscellaneous measurements only), May 1959 to Gage. --Crest-stage gage installed Sept. 26, 1962. Altitude of gage is 4,980 ft (from topographic map). Records equivalent to those at recorder site 1½ miles upstream (at different datum) used prior to October 1966.

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1952           | Apr. 19, 1952 | 4.08             | 421             |
| 1953           | June 3, 1953  | 4.65             | 608             |
| 1959           | Apr. 1, 1959  | 3.9              | 337             |
| 1960           | May 8, 1960   | 3.64             | 248             |
| 1961           | May 2, 1961   | 3.03             | 90              |
| 1962           | Apr. 16, 1962 | 3.42             | 285             |
| 1963           | Apr. 27, 1963 | 4.11             | 400             |
| 1964           | May 17, 1964  | 3.65             | 212             |
| 1965           | May 15, 1965  | 3.83             | 345             |
| 1966           | Mar. 31, 1966 | b 3.34           | a 250           |
| 1967           | May 8, 1967   | 1.00             | 300             |

a About.

b Backwater from ice.

#### 22. Pitcher Creek near Bozeman, Mont. (6-0467)

Location. -- Lat 45°39', long 110°56', in NW sec. 24, T.2 S., R.6 E., at culvert on county road, 5 miles east of Bozeman.

Drainage area. -- 2.33 sq mi.

Records available. -- 1951-53, miscellaneous measurements of base flow only. May 1959 to

Gage. -- Crest-stage gage installed May 6, 1959. Altitude of gage is 5,040 ft (from topographic map).

| Annual maximum | <u>uata</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960 .         | May 13, 1960  | 1.25             | 14              |
| 1961           | May 27, 1961  | •03              | 1               |
| 1962           | Apr. 24, 1962 | .89              | 9               |
| 1963           | Apr. 27, 1963 | 1.16             | 13              |
| 1964           | May 17, 1964  | • 97             | 10              |
| 1965           | May 16, 1965  | 2.10             | 19              |
| 1966           | June 10, 1966 | •73              | 7               |
| 1967           | May 8, 1967   | 1.81             | 12              |
|                | •             |                  |                 |

#### 23. Bear Canyon Creek near Bozeman, Mont. (6-0470)

Location. -- Lat  $45^{\circ}37'35''$ , long  $110^{\circ}55'45''$ , in  $NW_{\frac{1}{4}}$  sec. 36, T.2 S., R.6 E., 6 miles southeast of Bozeman.

<u>Drainage area.--17.0 sq mi.</u>

Records available. -- November 1951 to September 1953 (continuous record), May 1959 to

Gage.--Water-stage recorder re-installed May 5, 1959. Datum of
 gage is 5,183.4 ft above mean sea level, datum of 1929
 (unadjusted).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1952           | May 26, 1952  | 2.84             | 149             |
| 1953           | June 3, 1953  | 3.40             | 450             |
| 1959           | May 1, 1959   | 2.2              | a 150           |
| 1960           | May 12, 1960  | 2.62             | 202             |
| 1961           | May 22, 1961  | 1.77             | 46              |
| 1962           | July 14, 1962 | 2.74             | 175             |
| 1963           | May 9, 1963   | 2.43             | 110             |
| 1964           | May 20, 1964  | 2.56             | 134             |
| 1965           | May 16, 1965  | 2.61             | 145             |
| 1966           | May 10, 1966  | 2,26             | 82              |
| 1967           | June 7, 1967  | 2.45             | 162             |

24. Castle Creek tributary near Ringling, Mont. (6-0562)

Location. -- Lat 46°22', long lll°06', in NE sec.21, T.7 N., R.5 E., at culverts on U. S. Highway 12, 15 miles northwest of Ringling. Drainage area. -- 2.59 sq mi.

Records available. -- May 1959 to Gage. -- Crest-stage gage installed May 22, 1959. Altitude of gage is 5,400 ft (from topographic map).
Annual maximum data.--

| AIIIIual maximum | ua va •       |                  |                 |
|------------------|---------------|------------------|-----------------|
| Water year       | Date          | Gage height (ft) | Discharge (cfs) |
| 1960             | May 4, 1960   | 1.45             | 23              |
| 1961             | Apr. 25, 1961 | •91              | 12              |
| 1962             | Apr. 19, 1962 | 2.74             | 28              |
| 1963             | Feb. 4, 1963  | .81              | 11              |
| 1964             | May 1, 1964   | 2.99             | 35              |
| 1965             | May 1, 1965   | 2.88             | 27              |
| 1966             | May 3, 1966   | 1.03             | 12              |
| 1967             | May 23, 1967  | 3.01             | 35              |
|                  |               |                  |                 |

#### 25. Cabin Creek near Townsend, Mont. (6-0563)

Location. -- Lat 46°20', long lll°13', in  $NW_{\frac{1}{4}}$  sec.27, T.7 N., R.4 E., 100 ft upstream from mouth,  $14\frac{1}{2}$  miles east of Townsend.

Drainage area. -- 12.6 sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 22, 1959. Altitude of gage is 4,900 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           | June 4, 1960  | 2.00             | Not determined  |
| 1961           | June 22, 1961 | .14              | 2               |
| 1962           | May 22, 1962  | •37              | 8               |
| 1963           | June 21, 1963 | • 53             | 13              |
| 1964           | May 19, 1964  | 1.37             | 38              |
| 1965           | June 2, 1965  | 1.08             | 17              |
| 1966           | May 5, 1966   | 1.05             | 14              |
| 1967           | May 23, 1967  | 1.28             | 23              |

26. Deep Creek below North Fork Deep Creek, near Townsend, Mont. (6-0566)

Location. -- Lat 46°20', long lll°17', in SE½ sec.25, T.7 N., R.3 E., at bridge on county road, ll miles east of Townsend.

Drainage area. -- 87.7 sq mi. Records available. -- May 1959 to

Gage.--Crest-stage gage installed May 18, 1959. Altitude of gage is 4,510 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1959           | June 7, 1959  | 2.15             | 290             |
| 1960           | June 4, 1960  | 2.00             | 254             |
| 1961           | May 24, 1961  | 1.60             | 83              |
| 1962           | May 22, 1962  | 1.66             | 175             |
| 1963           | June 2, 1963  | 1.89             | 170             |
| 1964           | May 18, 1964  | 2.33             | 329             |
| 1965           | May 1, 1965   | 1.98             | 216             |
| 1966           | May 5, 1966   | 2.13             | 290             |
| 1967           | June 13, 1967 | 2.43             | 305             |
| -/0/           |               | = 5 . 5          | 5-7             |

27. Mitchell Gulch near East Helena, Mont. (6-0587).

Location. -- Lat 46°34', long 111°49', in NW4 sec.2, T.9 N., R.2 W., at culvert on U. S. Highway 12, 4.7 miles east of East Helena.

<u>Drainage area.--8.09 sq mi.</u> <u>Records available.--May 1959 to</u>

Gage.--Crest-stage gage installed May 14, 1959. Altitude of gage is 4,060 ft (from topographic map).

Annual maximum data. --Gage height (ft) Water year Discharge (cfs) 53 6 1959 e March 1959 0.96 Mar. 19, 1960 .32 1960 June 29, 1961 Mar. 20, 1962 Feb. 4, 1963 .27 2 1961 .43 1962 12 1.41 1963 107 1964 (c) Apr. 1, 1965 .62 1965 28 .93 Mar. 10, 1966 50 1966 Mar. 22, 1967 1967 .94 52

c No evidence of flow during year.

e Prior to installation of gage.

#### 28. Jackson Creek near East Helena, Mont. (6-0617)

Location. -- Lat 46°28'20", long lll°51'10", in SE½ sec.4, T.8 N., R.2 W., 300 ft upstream from mouth, 8½ miles southeast of East Helena.

Drainage area. -- 3.44 sq mi.

Records available .-- June 1960 to

Gage. -- Staff gage installed June 22, 1960, and crest-stage gage installed July 8, 1960. Altitude of gage is 4,990 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           |               | tion one         | Unknown         |
| 1961           | May 1, 1961   | 1.48             | 7+              |
| 1962           | June 2, 1962  | 2.49             | 16              |
| 1963           | June 4, 1963  | 2.21             | 12              |
| 1964           | June 8, 1964  | 2.64             | 19              |
| 1965           | June 25, 1965 | 2.34             | 14              |
| 1966           | May 10, 1966  | 1.97             | 7               |
| 1967           | June 8, 1967  | 2.73             | 20              |
| -/-/           | 7 7 - 1       | . 1 9            |                 |

#### 29. Crystal Creek near East Helena, Mont. (6-0618)

Location. -- Lat 46°29'00", long lll°51'40", in NW sec.4, T.8 N., R.2 W., a quarter of a mile upstream from mouth, 8 miles southeast of East Helena.

Drainage area. -- 3.77 sq mi.

Records available .-- June 1960 to

Gage. -- Staff gage installed June 22, 1960, and crest-stage gage installed July 8, 1960. Altitude of gage is 4,860 ft (from topographic map).

| P | unnual maximum | <u>data</u>   |      |            |   |      |
|---|----------------|---------------|------|------------|---|------|
|   | Water year     | Date          | Gage | height (ft | 7 ===================================== | efs) |
|   | 1960           |               |      |            | Unknown                                 |      |
|   | 1961           | May 1, 1961   |      | 1.59       | a 5                                     |      |
|   | 1962           | June 2, 1962  |      | 1.55       | 11                                      |      |
|   | 1963           | June 4, 1963  |      | 1.26       | 4                                       |      |
|   | 1964           | June 8, 1964  |      | 1.64       | 21                                      |      |
|   | 1965           | June 25, 1965 |      | 1.46       | 14                                      |      |
|   | 1966           | May 10, 1966  |      | 1.32       | 9                                       |      |
|   | 1967           | June 8, 1967  |      | 1.82       | 28                                      |      |

#### 30. McClellan Creek at City Diversion Dam, near East Helena, Mont. (6-0619)

Location. -- Lat 46°32'00", long lll°52'40", in SE½ sec.17, T.9 N., R.2 W., 300 ft upstream from diversion dam, ½ miles southeast of East Helena.

Drainage area. -- 33.2 sq mi.

Records available .-- June 1960 to

Gage. -- Staff gage installed June 23, 1960, and crest-stage gage installed July 7, 1960. Altitude of gage is 4,200 ft (from topographic map).

| Annual maximum | data            |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs) |
| 1960           | e May-June 1960 | 3.01             | 120             |
| 1961           | May 27, 1961    | •65              | 48              |
| 1962           | June 2, 1962    | 1.48             | 175             |
| 1963           | May 26, 1963    | • 95             | 87              |
| 1964           | June 8, 1964    | 2.59             | 390             |
| 1965           | June 25, 1965   | 1.72             | 220             |
| 1966           | May 11, 1966    | • 93             | 85              |
| 1967           | June 8, 1967    | 1.80             | 235             |

### 31. Little Porcupine Creek tributary near Helena, Mont. (6-0627)

Location.--Lat  $^{1}$ 46°35', long 112°16', in  $SW_{4}^{1}$  sec.29, T.10 N., R.5 W., at culvert on U. S. Highway 12, 11 miles west of Helena.

<u>Drainage area</u>.--0.48 sq mi. <u>Records available</u>.--May 1959 to

Gage. -- Crest-stage gage installed May 14, 1959. Altitude of gage is 5,360 ft (from topographic map).

| A | mnar maxrmum ( | <u>ua ta • </u> |                  |                 |
|---|----------------|-----------------|------------------|-----------------|
|   | Water year     | Date            | Gage height (ft) | Discharge (cfs) |
|   | 1959           | June 6, 1959    | 0.45             | 1.5             |
|   | 1960           | May 12, 1960    | •39              | 1.2             |
|   | 1961           | May 22, 1961    | .17              | • 7+            |
|   | 1962           | June 2, 1962.   | •49              | 1.7             |
|   | 1963           | May 20, 1963    | • 57             | 2.2             |
|   | 1964           | June 8, 1964    | 1.17             | 5.9             |
|   | 1965           | May 1, 1965     | .60              | 3.0             |
|   | 1966           | May 7, 1966     | .28              | 1.4             |
|   | 1967           | May 29, 1967    | • 74             | 3.8             |
|   |                |                 |                  |                 |

e Prior to installation of gage.

Location .-- Lat 46°56', long 112°08', in NE 4 sec. 29, T.14 N., R.4 W., 135 ft upstream from mouth, 5½ miles southwest of Wolf Creek.

Drainage area. -- 29.4 sq mi.

Records available .-- May 1959 to

Gage .-- Crest-stage gage installed May 15, 1959. Altitude of gage is 3,730 ft (from topographic map).

| AIIIIual maximum u | .aua. ==      |                  |                 |
|--------------------|---------------|------------------|-----------------|
| Water year         | Date          | Gage height (ft) | Discharge (cfs) |
| 1959               | June 6, 1959  | 0.81             | 63              |
| 1960               | June 2, 1960  | .81              | 63              |
| 1961               | May 28, 1961  | .12              | 13              |
| 1962               | May 22, 1962  | 1.57             | 158             |
| 1963               | Feb. 4, 1963  | 1.3              | 120             |
| 1964               | June 8, 1964  | 3.80             | 490             |
| 1965               | Apr. 22, 1965 | 1.55             | 155             |
| 1966               | May 11, 1966  | •69              | 41              |
| 1967               | June 13, 1967 | 2.45             | 345             |
|                    |               |                  |                 |

#### 33. Dog Creek near Craig, Mont. (6-0714)

Location .-- Lat 47°05', long 112°00', in NW sec. 4, T.15 N., R.3 W., at bridge on county road, 2 miles west of Craig.

Drainage area.--15.9 sg mi.

Records available. -- May 1959 to

Gage. -- Crest-stage gage installed May 15, 1959. Altitude of gage
is 3,660 ft (from topographic map).

Annual maximum data. --

| Water year Date Gage height (ft) Discharge | (cfs) |
|--|-------|
| 1960 Mar. 19, 1960 0.41 a 30               |       |
| 1961 May 30, 1961 4.40 1,160               |       |
| 1962 Mar. 17, 1962 2.42 114                |       |
| 1963 Feb. 3, 1963 2.05 70                  |       |
| 1964 June 8, 1964 1.97 65                  |       |
| 1965 Feb. 17, 1965 2.99 200                |       |
| 1966 Mar. 10, 1966 3.11 230                |       |
| 1967 June 12, 1967 2.37 65                 |       |

# 34. Wegner Creek at Craig, Mont. (6-0716)

Location. -- Lat 47°05', long lll°57', in NW1/4 sec.ll, T.15 N., R.3 W., at bridge on Interstate Highway 15 and U. S. Highway 91, 0.9 mile east of Craig.

Drainage area. -- 35.0 sq mi. Records available .-- May 1959 to

Gage .-- Crest-stage gage installed May 15, 1959. Altitude of gage is 3,450 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1960           | June 2, 1960  | 0.59             | 46              |
| 1961           | July 6, 1961  | 2.54             | 1+08            |
| 1962           | Apr. 19, 1962 | •33              | 24              |
| 1963           | Feb. 3, 1963  | .67              | 48              |
| 1964           | May 6, 1964   | 1.84             | 280             |
| 1965           | Mar. 31, 1965 | 1.11             | 125             |
| 1966           | July 1, 1966  | 4.64             | 1,020           |
| 1967           | June 12, 1967 | 1.06             | 160             |

# 35. Five Mile Creek near White Sulphur Springs, Mont. (6-0756)

Location. -- Lat 46°37', long 110°45', in SW sec.20, T.10 N., R.8 E., at culvert on U. S. Highway 12, 8 miles northeast of White Sulphur Springs.

Drainage area. -- 6.00 sq mi. Records available. -- May 1959 to

Gage .-- Crest-stage gage installed May 22, 1959. Altitude of gage is 5,380 ft (from topographic map).

| AIHIUAL MAXIMUM | <u>uata</u>   |                  |                 |
|-----------------|---------------|------------------|-----------------|
| Water year      | Date          | Gage height (ft) | Discharge (cfs) |
| 1960            | May 1, 1960   | 1.25             | 9               |
| 1961            |               | gain gain        | (c)             |
| 1962            | Mar. 27, 1962 | 1.38             | 11              |
| 1963            | Feb. 4, 1963  | • 2.06           | a 20            |
| 1964            | June 8, 1964  | 1.16             | 8               |
| 1965            | April 1965    | 1.86             | 17              |
| 1966            | Mar. 30, 1966 | b 3.34           | a 15            |
| 1967            | May 23, 1967  | 1.31             | 10              |
|                 | •             |                  |                 |

a About.

b Backwater from ice

c No evidence of flow during year.

36. Newland Creek near White Sulphur Springs, Mont. (6-0760)

Location. -- Lat 46°44', long 110°50', near line between secs. 9 and 10, T.11 N., R.7 E., 15 miles upstream from mouth, 13 miles north of White Sulphur Springs.

Drainage area. -- 6.74 sq mi.

Records available. -- September 1945 to November 1953 (continuous record), June 1959 to

Gage.--Water-stage recorder re-installed June 19, 1959. Altitude of gage is 5,590 ft (by barometer).

Annual maximum data.--

| AIIIIual maximum ( | 1a ca •                    |                  |                 |
|--------------------|----------------------------|------------------|-----------------|
| Water year         | Date                       | Gage height (ft) | Discharge (cfs) |
| 1946               | June 11,17, 194            | 6 0.72           | d 4.9           |
| 1947               | May 6, 1947                | 2.18             | 18              |
| 1948               | May 6, 1947<br>May 8, 1948 | 2.64             | 29<br>6.2       |
| 1949               | June 1, 1949               | 1.48             | 6.2             |
| 1950               | May 28, 1950               | 1.64             | 9.5             |
| 1951               | May 13, 1951               | 1.62             | li              |
| 1952               | May 4, 1952                | 1.66             | 14              |
| 1953               | June 4, 1953               | 3.50             | 56              |
| 1960               | May 19, 1960               | 2.39             | 5.1             |
| 1961               | May 31, 1961               | 2.18             | 3.2             |
| 1962               | May 29, 1962               | 2.68             | 15              |
| 1963               | June 26, 1963              | 2.53             | 11              |
| 1964               | May 17, 1964               | 3.16             | 37              |
| 1965               | May 17, 1965               | 3.14             | 36              |
| 1966               | May 10, 1966               | 2.53             | 1,1             |
| 1967               | May 23, 1967               | 3.00             | 34              |

# 37. Sheep Creek near Neihart, Mont. (6-0767)

Location. -- Lat 46°48', long 110°42', in SE1 sec.15, T.12 N., R.8 E., at culvert on U. S. Highway 89, 10 miles south of Neihart.

<u>Drainage area.--5.30 sq mi.</u> <u>Records available.--May 1959 to</u>

Gage. -- Crest-stage gage installed May 22, 1959. Altitude of gage is 6,600 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1960           | May 12, 1960  | 1.12             | 38              |
| 1961           | May 27, 1961  | 1.11             | 37              |
| 1962           | May 21, 1962  | 1.37             | 49              |
| 1963           | June 2, 1963  | 1.08             | 39              |
| 1964           | June 8, 1964  | 2.12             | 113             |
| 1965           | June 16, 1965 | 2.40             | 138             |
| 1966           | May 10, 1966  | 1.27             | 50              |
| 1967           | May 31, 1967  | 2.07             | 110             |

# 38. Nugget Creek near Neihart, Mont. (6-0768)

Location. -- Lat 46°47', long 110°42', in NE sec. 27, T.12 N., R.8 E., at culvert on U. S. Highway 89, 11 miles south of Neihart.

<u>Drainage area.--1.48</u> sq mi. <u>Records available.--May 1959</u> to

Gage.--Crest-stage gage installed May 22, 1959. Altitude of gage is 6,400 ft (from topographic map).

|                | 1 0 -1        | - L              |                        |
|----------------|---------------|------------------|------------------------|
| Annual maximum | data          |                  |                        |
| Water year     | Date          | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1959           | June 7, 1959  | 1.05             | 14                     |
| 1960           | May 12, 1960  | •38              | 5                      |
| 1961           | May 27, 1961  | •30              | <u>1</u>               |
| 1962           | May 25, 1962  | •50              | 6                      |
| 1963           | June 2, 1963  | 50               | 6                      |
| 1964           | May 21, 1964  | 1.07             | 15                     |
| 1965           | June 16, 1965 | 1.13             | 12                     |
| 1966           | May 10, 1966  | .68              | 8                      |
| 1967           | May 31, 1967  | 1.42             | 17                     |
|                |               |                  |                        |

#### 39. Smith River tributary near Eden, Mont. (6-0777)

Location. -- Lat  $48^{\circ}18'$ , long  $111^{\circ}26'$ , in  $SW_{\frac{1}{4}}$  sec. 13, T.18 N., R.2 E., at bridge on county road, 7½ miles northwest of Eden.

Drainage area. -- 1.63 sq mi.

Records available. -- May 1959 to Gage. -- Crest-stage gage installed May 25, 1959. Altitude of gage is

3,420 ft (from topographic map).

| AIIIIual maximum | uata          |                  |                 |
|------------------|---------------|------------------|-----------------|
| Water year       | Date          | Gage height (ft) | Discharge (cfs) |
| 1960             | Mar. 17, 1960 | 0.32             | 1.8             |
| 1961             |               |                  | (c)             |
| 1962             | June 15, 1962 | •72              | 4.5             |
| 1963             | Feb. 2, 1963  | .67              | 4.0             |
| 1964             | May 3, 1964   | •30              | 1.7             |
| 1965             | July 30, 1965 | 1.24             | a 9             |
| 1966             | Mar. 8, 1966  | .91              | a 15            |
| 1967             | June 14, 1967 | 09               | 2               |
|                  |               |                  |                 |

# 40. Goodman Coulee near Eden, Mont. (6-0778)

Location. -- Lat 47°20', long 111°25', in center sec.12, T.18 N., R.2 E. at culvert on county road, 8 miles northwest of Eden.

Drainage area. -- 21.8 sq mi.

Records available. -- May 1959 to Gage. -- Crest-stage gage installed May 25, 1959. Altitude of gage is 3,370 ft (from topographic map).

| Annual maximum | <u>data</u>     |                  |                  |
|----------------|-----------------|------------------|------------------|
| Water year     | <u>Date</u>     | Gage height (ft) | Discharge (cfs)  |
| 1959           | e Apr. 22, 1959 | 1.57             | 49               |
| 1960           | May 1, 1960     | 1.92             | 1+1              |
| 1961           | <u></u>         |                  | (c)              |
| 1962           | Mar. 19, 1962   | 4.17             | 127              |
| 1963           | Feb. 4, 1963    | • 2.30           | 55               |
| 1964           | May 3, 1964     | 5 <b>.</b> 73    | 150              |
| 1965           | July 30, 1965   | 3.80             | 117              |
| 1966           | Mar. 8, 1966    | 6.73             | <sup>1</sup> +37 |
| 1967           | June 15, 1967   | 4.33             | a 100            |

a About.

c No evidence of flow during year.

e Prior to installation of gage; peak discharge computed from highwater marks along highway embankment at culvert.

41. Beaver Creek at Gibson Dam, near Augusta, Mont. (6-0796)

Location. -- Lat 47°36', long 112°45', in SE½ sec.4, T.21 N., R.9 W., at bridge on county road, 19 miles northwest of Augusta.

Drainage area. -- 20.3 sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 28, 1959. Altitude of gage is 4,560 ft (from topographic map).

| AILIUAL MAXIMUM | ua va •       |                  |                 |
|-----------------|---------------|------------------|-----------------|
| Water year      | Date          | Gage height (ft) | Discharge (cfs) |
| 1959            | June 6, 1959  | 0.78             | 110             |
| 1960            | May 12, 1960  | 2.28             | 458             |
| 1961            | May 7, 1961   | •37              | , 55            |
| 1962            | May 26, 1962  | 2.45             | 496             |
| 1963            | May 25, 1963  | •85              | , 155           |
| 1964            | June 8, 1964  |                  | 4,360           |
| 1965            | June 11, 1965 | •71              | 75              |
| 1966            | May 29, 1966  | -41              | 40              |
| 1967            | May 30, 1967  | 1.16             | 300             |
|                 |               |                  |                 |

# 42. Muddy Creek tributary near Power, Mont. (6-0879)

Location. -- Lat 47°45', long lll°43', on south line of SW½ sec.10., T.23 N., R.1 W., at culvert on county road, 3 miles west of U. S. Highway 91, 3½ miles northwest of Power, and 6 miles south

of Dutton.

<u>Drainage area.--3.15</u> sq mi.

Records available .-- April 1963 to

Gage.--Crest-stage gage installed Apr. 16, 1963. Altitude of gage is 3,710 ft (from topographic map).

Annual maximum data.--

| ht (ft) Discharge (cfs) |
|-------------------------|
| 15 19                   |
| 26 28 <sup>1</sup> +    |
| 27 130                  |
| 41 620                  |
| 73 62                   |
|                         |

43. Sun River tributary near Great Falls, Mont. (6-0893)

Location. -- Lat 47°32', long lll°24', in SW4 sec.31, T.21 N., R.3 E., at culvert on old U. S. Highways 89 and 91, 4 miles northwest of Great Falls.

Drainage area. -- 21.1 sq mi.

Records available .-- August 1955 to

Gage. -- Crest-stage gage installed Aug. 15, 1955. Altitude of gage is 3,330 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1956           | Mar. 20, 1956 | 1.20             | 1               |
| 1957           | June 16, 1957 | 1.05             | .1              |
| 1958           | July 3, 1958  | 2.74             | 156             |
| 1959           | Mar. 2, 1959  | 2.52             | 116             |
| 1960           | May 23, 1960  | 1.28             | 6               |
| 1961           |               | ee ee            | (c)             |
| 1962           | May 21, 1962  | 3.06             | a 150           |
| 1963           | July 5, 1963  | 1.64             | 18              |
| 1964           | June 8, 1964  | 5.46             | 470             |
| 1965           | June 26, 1965 | 4.39             | 280             |
| 1966           | Mar. 9, 1966  | 3.54             | 165             |
| 1967           | July 3, 1967  | 2.92             | 102             |
| / - (          | • - / · ·     |                  |                 |

44. Middle Fork Dry Fork Marias River near Dupuyer, Mont. (6-0997)

Location. -- Lat 48°09', long 112°28', in NE<sup>1</sup>/<sub>4</sub> sec.35, T.28 N., R.7 W., at culvert on county road, 4 miles southeast of Dupuyer.

Drainage area. -- 20.2 sq mi.

Records available. -- May 1959 to . Prior to 1964, published as North Fork Dry Fork Marias River near Dupuyer.

Gage.--Crest-stage gage installed May 28, 1959. Altitude of gage
is 4,120 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1960           | Mar. 17, 1960 | b 1.24           | a 70            |
| 1961           | May 7, 1961   | . •29            | 10              |
| 1962           | Mar. 19, 1962 | •99              | 61              |
| 1963           | Feb. 3, 1963  | b 2.11           | a 45            |
| 1964           | June 8, 1964  | 6.56             | 4,240           |
| 1965           | Feb. 20, 1965 | 4.87             | a´300           |
| 1966           | Mar. 26, 1966 | 2.22             | 100             |
| 1967           | May 9, 1967   | 4.15             | 240             |
| 7 - 1          |               |                  |                 |

a About.

b Backwater from ice.

c No evidence of flow during year.

45. Heines Coulee tributary near Valier, Mont. (6-1002)

Location. -- Lat 48°15', long 112°14', in NE4 sec. 27, T.29 N., R.5 W., at culvert on county road, 4 miles south of Valier.

Drainage area. -- 0.60 sq mi.

Records available .-- May 1959 to

Gage.--Crest-stage gage installed May 27, 1959. Altitude of gage is 3,860 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           | May 1, 1960   | 0.92             | 9               |
| 1961           | May 17, 1961  | • 54             | 7+              |
| 1962           | Jan. 29, 1962 | b .41            | a 2             |
| 1963           | Ogalo diam    | WHITE DAMA       | (c)             |
| 1964           | June 8, 1964  | 10.57            | 64              |
| 1965           | June 15, 1965 | 1.00             | 6               |
| 1966           | Mar. 26, 1966 | 1.05             | 7               |
| 1967           | May 7, 1967   | 1.46             | 12              |
| · ·            |               |                  |                 |

# 46. Lone Man Coulee near Valier, Mont. (6-1003)

Location. -- Lat 48°14', long 112°14', in SE sec. 27, T.29 N., R.5 W., at culvert on county road, 5 miles south of Valier.

<u>Drainage area.--14.1</u> sq mi. <u>Records available.--May 1959</u> to

Gage.--Crest-stage gage installed May 27, 1959. Altitude of gage is 3,780 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1960           | May 1, 1960   | 0.58             | 32              |
| 1961           | May 17, 1961  | •36              | 22              |
| 1962           | Jan. 29, 1962 | b 2.87           | a 15            |
| 1963           | Aug. 19, 1963 | •49              | 27              |
| 1964           | June 8, 1964  | 2.38             | 1,740           |
| 1965           | Feb. 17, 1965 | 1.38             | 7+00            |
| 1966           | Mar. 9, 1966  | 1000 1000        | 140             |
| 1967           | June 10, 1967 | •91              | 135             |
|                | •             |                  |                 |

a About.

b Backwater from ice.

c No evidence of flow during year.

47. Marias River tributary No. 3 near Chester, Mont. (6-1016)

Location. -- Lat 48°14', long 110°53', in NE4 sec.36, T.29 N., R.6E., at culvert on State Secondary Highway 223, 2.1 miles south of Marias River bridge and 20 miles southeast of Chester.

Drainage area. -- 0.32 sq mi.

Records available .-- May 1962 to

Gage.--Crest-stage gage installed Apr. 18, 1963. Altitude of gage is 2,900 ft (from topographic map).

| Ammual maximum | <u>uata</u>    |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1962           | e May 21, 1962 | 3.18             | 29              |
| 1963           | July 4, 1963   | 1.20             | 9               |
| 1964           | June 8, 1964   | 1.37             | 11              |
| 1965           | June 17, 1965  | 1.67             | 14              |
| 1966           | June 4, 1966   | .48              | 7+              |
| 1967           | February 1967  | .32              | 3               |
| 2,01           |                | 3-               | 9               |

48. Cottonwood Creek tributary near Chester, Mont. (6-1017)

Location. --Lat 48°27', long lll°05', near center of east line of sec.9, T.31 N., R.5 E., at culvert on county road 3½ miles south of Tiber Siding on Great Northern Railway and U. S. Highway 2, 6½ miles southwest of Chester.

Drainage area. -- 2.28 sq mi.

Records available. -- April 1963 to

Gage. -- Crest-stage gage installed Apr. 17, 1963. Altitude of gage is 3,100 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1963           | June 28, 1963 | 4.08             | 79 (revised)    |
| 1964           | June 8, 1964  | .98              | a 10            |
| 1965           | Apr. 10, 1965 | 3.34             | 67              |
| 1966           | July 3, 1966  | 1.61             | 21              |
| 1967           | Mar. 22, 1967 | 5.01             | 96              |

a About.

e Prior to installation of gage.

49. Cottonwood Creek tributary No. 2 near Chester, Mont. (6-1018)

Location. -- Lat 48°20', long 110°57', in NW sec. 27, T.30 N., R.6 E., at bridge on State Secondary Highway 223, 5½ road miles north of Marias River bridge, and 12 miles south of Chester. Drainage area. -- 24.6 sq mi.

Records available .-- April 1963 to

Gage. -- Crest-stage gage installed Apr. 17, 1963. Altitude of gage is 2,950 ft (from topographic map).

| AILIUAL MAALMUM ( | <u>uata • = = </u> |                  |                        |
|-------------------|--------------------|------------------|------------------------|
| Water year        | Date               | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1963              |                    |                  | (c)                    |
| 1964              | June 8, 1964       | 2.35             | 75                     |
| 1965              | Apr. 7, 1965       | 3.18             | 220                    |
| 1966              | July 3, 1966       | 2.70             | 130                    |
| 1967              | Mar. 21, 1967      | 2.20             | 55                     |
| =/0/              |                    | 2020             |                        |

50. Dead Indian Coulee near Fort Benton, Mont. (6-1019)

Location. -- Lat 48°05', long 110°50', in center of sec.21, T.27 N., R.7 E., at culvert on State Secondary Highway 223, 20 miles northwest of Fort Benton.

<u>Drainage area.--2.73</u> sq mi.

Records available. -- April 1963 to

Gage .-- Crest-stage gage installed Apr. 18, 1963. Altitude of gage is 3,250 ft (from topographic map).

| Annual maximum | data          |                  |                        |
|----------------|---------------|------------------|------------------------|
| Water year     | Date          | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1963           |               |                  | (c)                    |
| 1964           | May 3, 1964   | 2.19             | 22                     |
| 1965           | Feb. 17, 1965 | 4.16             | 52                     |
| 1966           | Mar. 9, 1966  | 4.95             | 116                    |
| 1967           | Mar. 21, 1967 | .21              | <1                     |

c No evidence of flow during year.

Location. -- Lat 47°57', long 110°33', in SW<sup>1</sup>/<sub>4</sub> sec.2, T.25 N., R.9 E., at culvert on county road, 2 miles west of Loma.

Drainage area. -- 0.84 sq mi.

Records available. -- May 1959 to Gage. -- Crest-stage gage installed May 25, 1959. Altitude of gage is 2,580 ft (from topographic map).

| Annual maximum | data           |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1959           | e Mar. 1, 1959 | 4.02             | 71              |
| 1960           | Mar. 17, 1960  | .41              | a 2             |
| 1961           | May 31, 1961   | b 1.42           | a l             |
| 1962           | May 21, 1962   | .85              | 6               |
| 1963           | Aug. 25, 1963  | 1.54             | 16              |
| 1964           | Aug. 19, 1964  | 1.06             | . 8             |
| 1965           | June 24, 1965  | 7.23             | 244             |
| 1966           | June 3, 1966   | 3.27             | 54              |
| 1967           | March 1967     | 1.09             | 7               |
|                |                |                  |                 |

#### 52. Marias River tributary at Loma, Mont. (6-1022)

Location. --Lat 47°57', long 110°31', in SW4SE4 sec.1, T.25 N., R.9 E, at bridge on county road, five eighths of a mile west of Loma. Drainage area. --1.62 sq mi.

Records available .-- August 1955 to

Gage. -- Crest-stage gage installed Aug. 18, 1955. Altitude of gage is 2,590 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1956           | 1956          | b 0.8            | a 5             |
| 1957           | Mar. 1, 1957  | b 1.74           | a 3             |
| 1958           | Mar. 29, 1958 | .68              | a 4             |
| 1959           | Mar. 1, 1959  | b 2.9            | a 12            |
| 1960           | Mar. 17, 1960 | 1.50             | a 6             |
| 1961           | one one       | 1 mm             | (c)             |
| 1962           | May 21, 1962  | 2.11             | a 20            |
| 1963           | Feb. 4, 1963  | b 1.88           | a <b>1</b> 0    |
| 1964           | Aug. 19, 1964 | b 1.58           | a 8             |
| 1965           | June 24, 1965 | 4.87             | 300             |
| 1966           | June 3, 1966  | 2.43             | 82              |
| 1967           | March 1967    | 1.43             | 76              |

a About.

b Backwater from ice.

c No evidence of flow during year.

e Prior to installation of gage.

53. Marias River tributary No. 2 at Loma, Mont. (6-1023)

Location. -- Lat 47°57', long 110°30', in NE½NE½ sec.12, T.25 N., R.9 E., at culvert on approach to U. S. Highway 87, a quarter of a mile north of Loma.

Drainage area. -- 0.25 sq mi.

Records available .-- August 1955 to

Gage. -- Crest-stage gage installed Aug. 18, 1955. Altitude of gage

is 2,590 ft (from topographic map).

| Annual maximum                       | data   |                                     |                               |
|--------------------------------------|--|-------------------------------------|-------------------------------|
| Water year<br>1956<br>1957<br>1958   | Date May 27, 1956 Mar. 1, 1957 Mar. 29, 1958                                     | Gage height (ft) 2.97 b 2.46 b 1.40 | Discharge (cfs) a 20 a 10 a 1 |
| 1959<br>1960<br>1961<br>1962         | February 1959<br>Mar. 17, 1960<br>————————————————————————————————————           | 1.01<br>b 1.73<br><br>b 1.55        | a 1<br>a 2<br>(c)<br>a 2      |
| 1963<br>1964<br>1965<br>1966<br>1967 | June 28, 1963<br>Aug. 19, 1964<br>June 24, 1965<br>June 3, 1966<br>June 14, 1967 | 2.60<br>1.38<br>4.78<br>2.85<br>.92 | a 15<br>2<br>42<br>18<br><•5  |

54. Bruce Coulee tributary near Choteau, Mont. (6-1058)

Location. -- Lat 47°44', long 112°15', near center of sec.21, T.23 N., R.5 W., at culvert on county road, 1.2 miles west of State Highway 287, 6 miles southwest of Choteau.

<u>Drainage area</u>.--1.70 sq mi.

Records available. -- April 1963 to

Gage. -- Crest-stage gage installed Apr. 16, 1963. Altitude of gage is 3,940 ft (from topographic map).

Annual maximum data. --

| <u> </u>      |  |   |
|---------------|--|---|
| Date          | Gage height (ft)   | Discharge (cfs)   |
| June 28, 1963 | 0.65   | a 18  |
| June 8, 1964  | 1.76   | 148   |
| June 16, 1965 | 1.90   | 140   |
| July 2, 1966  | 3.50   | 247   |
| June 10, 1967 | 2.44   | 155   |
|               | Date June 28, 1963 June 8, 1964 June 16, 1965 July 2, 1966 | Date Gage height (ft) June 28, 1963 0.65 June 8, 1964 1.76 June 16, 1965 1.90 July 2, 1966 3.50 |

a About.

b Backwater from ice.

c No evidence of flow during year.

Location. -- Lat 47°51', long lll°36', in center of north line of sec.15, T.24 N., R.1 E., at culverts on county road, 5.1 miles east of Dutton on Diamond Valley Road.

Drainage area. -- 9.67 sq mi.

Records available .-- April 1963 to

Gage. -- Crest-stage gage installed Apr. 17, 1963. Altitude of gage is 3,560 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1963           |               |                  | (c)             |
| 1964           | June 21, 1964 | 8.0              | 364             |
| 1965           | June 16, 1965 | 1.39             | 24              |
| 1966           | July 2, 1966  | 10.72            | 2,070           |
| 1967           | May 7, 1967   | 1.31             | 20              |

56. Kinley Coulee tributary near Dutton, Mont. (6-1083)

Location.--Lat 47°51', long lll°33', on north line of NW4 sec.13, T.24 N., R.1 E., at culverts on county road, 6.5 miles east of Dutton on Diamond Valley Road.

Drainage area. -- 2.65 sq mi.

Records available. -- April 1963 to

Gage. -- Crest-stage gage installed Apr. 16, 1963. Altitude of gage is 3,610 ft (from topographic map).

| Annual maximum | <u>data</u>    |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1963           | Sept. 16, 1963 | 1.28             | 18              |
| 1964           | June 8, 1964   | 2.98             | 76              |
| 1965           | Mar. 31, 1965  | 1.43             | 7               |
| 1966           | July 2, 1966   | 14.77            | 465             |
| 1967           | May 7, 1967    | 1.59             | 25              |

c No evidence of flow during year.

57. Judith River tributary near Utica, Mont. (6-1099)

Location. -- Lat 46°53', long 110°16', in SW sec.13, T.13 N., R.11E., at bridge on county road, 10 miles southwest of Utica.

<u>Drainage area.--7.17</u> sq mi. <u>Records available.--May 1959</u> to

Gage. -- Crest-stage gage installed May 21, 1959. Altitude of gage is 5,100 ft (from topographic map).

| Annual maximum | <u>uata</u>   |                  |                               |
|----------------|---------------|------------------|-------------------------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs)               |
| 1960           | Mar. 18, 1960 | 0.65             | Not determined                |
| 1961           |               |                  | (c)                           |
| 1962           | June 14, 1962 | 1.00             | Not determined                |
| 1963           | Feb. 4, 1963  | b 3.33           | Not determined                |
| 1964           | <u></u>       |                  | (c)                           |
| 1965           | April 1965    | 2.46             | 83                            |
| 1966           | Mar. 10, 1966 | 2.06<br>•55      | Not determined Not determined |
| 1967           | June 10, 1967 | • 55             | Not determined                |
|                |               |                  |                               |

58. Judith River tributary No. 2 near Utica, Mont. (6-1099.5)

Location. -- Lat  $46^{\circ}54'$ , long  $110^{\circ}15'$ , in  $SE_{4}^{1}$  sec. 7, T.13 N., R.12 E., at bridge on county road,  $9\frac{1}{2}$  miles southwest of Utica.

<u>Drainage area.--6.97</u> sq mi.
<u>Records available.--May 1959</u> to September 1967 (discontinued).

Gage. -- Crest-stage gage installed May 21, 1959. Altitude of gage is 4,850 ft (from topographic map).

| AIIIIual maximum d | <u>aua</u>     |                  |                 |
|--------------------|----------------|------------------|-----------------|
| Water year         | Date           | Gage height (ft) | Discharge (cfs) |
| 1960               | Mar. 18, 1960  | 0.70             | Not determined  |
| 1961               |                |                  | (c)             |
| 1962               | June 14, 1962  | •90              | Not determined  |
| 1963               | Feb. 4, 1963   | 1.00             | Not determined  |
| 1964               | June 8, 1964   | 1.29             | Not determined  |
| 1965               | April 1965     | 1.69             | Not determined  |
| 1966               | Mar. 10, 1966  | .18              | Not determined  |
| 1967               | Sept. 13, 1967 | •96              | Not determined  |

b Backwater from ice.

c No evidence of flow during year.

# 59. Casino Creek tributary near Lewistown, Mont. (6-1117)

Location. -- Lat 47°00', long 109°26', in NE sec. 9, T.14 N., R.18 E., at culverts on county road, 5 miles south of Lewistown.

Drainage area. -- 3.53 sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 21, 1959. Altitude of gage is 4,200 ft (from topographic map).

| Annual maximum | <u>data</u>   |                    |                 |
|----------------|---------------|--------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft)   | Discharge (cfs) |
| 1960           | Mar. 18, 1960 | 0.94               | 10              |
| 1961           |               |                    | (c)             |
| 1962           | May 21, 1962  | 3.21+              | 7+0             |
| 1963           | May 12, 1963  | • 5 <sup>1</sup> + | . 5             |
| 1964           | May 3, 1964   | 3.67               | <u> </u>        |
| 1965           | June 17, 1965 | 5.00               | 66              |
| 1966           | Mar. 12, 1966 | b 1.71             | al              |
| 1967           | June 14, 1967 | 2.44               | 29              |
|                |               |                    |                 |

# 60. Cottonwood Creek near Moore, Mont. (6-1121)

Location. -- Lat 46°59', long 109°29', in NW sec.18, T.14 N., R.18 E., 30 ft downstream from bridge on county road, 9½ miles east of Moore, and 12 miles upstream from mouth.

Drainage area. -- 47.9 sq mi.

Records available. -- August 1957 to September 1963 (continuous record), October 1963 to

Gage. -- Water-stage recorder. Altitude of gage is 4,300 ft (from topographic map).

| Annual maximum da | <u>  ta • </u> |                  |                 |
|-------------------|----------------|------------------|-----------------|
| Water year        | Date           | Gage height (ft) | Discharge (cfs) |
| 1958              | May 22, 1958   | 3.78             | 57              |
| 1959              | June 7, 1959   | 5.42             | 143             |
| 1960              | June 4, 1960   | 4.50             | 102             |
| 1961              | June 1, 1961   | 4.83             | 101             |
| 1962              | May 22, 1962   | 6.77             | 683             |
| 1963              | June 15, 1963  | 4.75             | 216             |
| 1964              | June 9, 1964   | 7.68             | 1,220           |
| 1965              | June 17, 1965  | 4.52             | 162             |
| 1966              | May 29, 1966   | 4.47             | 155             |
| 1967              | June 8, 1967   | 7.60             | 1,180           |

a About.

b Backwater from ice.

c No evidence of flow during year.

# 61. Missouri River tributary near Landusky, Mont. (6-1151)

Location. -- Lat 47°38', long 108°42', in NW sec. 31, T.22 N., R.24 E., at culvert on county road 0.4 mile west of U. S. Highway 191 along south side of Missouri River, 19 miles south of Landusky.

Drainage area.--3.39 sq mi.

Records available .-- June 1962 to

Gage .-- Crest-stage gage installed May 14, 1963. Altitude of gage is 2,280 ft (from topographic map).

| Annual | maximum | data |  |
|--------|---------|------|--|
|        |         |      |  |

| MILIUAL MAXIMUM | aava.           |                    |                        |
|-----------------|-----------------|--------------------|------------------------|
| Water year      | Date            | Gage height (ft)   | <u>Discharge (cfs)</u> |
| 1962            | e June 15, 1962 |                    | >500                   |
| 1963            | July 18, 1963   | 3.75               | 111                    |
| 1964            | May 3, 1964     | • O <sub>1</sub> + | 1                      |
| 1965            | May 7, 1965     | 1.07               | 20                     |
| 1966            |                 |                    | (c)                    |
| 1967            | Mar. 23, 1967   | 1.86               | 30                     |
|                 | •               |                    |                        |

# 62. Duval Creek near Landusky, Mont. (6-1153)

Location. -- Lat 47°45', long 108°42', in center of sec. 13, T.23 N., R.23 E., at culvert on U. S. Highway 191, 10.0 road miles north of the Fred L. Robinson Bridge over the Missouri River, 11 miles southwest of Landusky.

Drainage area. -- 3.31 sq mi.

Records available. -- May 1963 to

Gage .-- Crest-stage gage installed May 14, 1963. Altitude of gage is 2,900 ft (from topographic map).

| Annua. | L maximum | data |
|--------|-----------|------|
|        |           |      |

| Water year | Date          | Gage height (ft) | Discharge (cfs) |
|------------|---------------|------------------|-----------------|
| 1963       | May 11, 1963  | 2.13             | 46              |
| 1964       | Aug. 20, 1964 | 4.23             | 145             |
| 1965       | May 7, 1965   | 6.30             | 280             |
| 1966       | Apr. 26, 1966 | 2.14             | 47              |
| 1967       | Mar. 23, 1967 | 3.80             | 73              |

c No evidence of flow during year.

e Prior to installation of gage.

63. Antelope Creek tributary near Harlowton, Mont. (6-1206)

Location. -- Lat 46°39', long 109°58', in NE<sup>1</sup>/<sub>4</sub> sec. 8, T.10 N., R.14 E., at culvert on county road, 18.3 miles northwest of Harlowton.

Drainage area. -- 0.47 sq mi.

Records available. -- July 1955 to

Gage. -- Crest-stage gage installed July 13, 1955. Altitude of gage
is 5,400 ft (from topographic map).

Annual maximum data .--Date Gage height (ft) Discharge Water year June 15, 1956 1956 1.36 March 1957 1957 .56 1958 1959 March 1959 1.72 Mar. 18, 1960 1960 2.04 June 13, 1961 .25 1961 Mar. 26, 1962 Feb. 4, 1963 1962 1963 1.32 1964 (c) 1.15 1965 April 1965 July 2, 1966 Apr. 12, 1967 1966 1.47 .92 1967

# 64. Antelope Creek tributary near mouth, near Harlowton, Mont. (6-1207)

Location. -- Lat 46°37', long 109°57', in NW sec. 22, T.10 N., R.14 E., at bridge on county road, 16.3 miles northwest of Harlowton.

Drainage area.--1.92 sq mi.
Records available.--July 1955 to

Gage.--Crest-stage gage installed July 12, 1955. Altitude of gage
is 5,000 ft (from topographic map).

| Annual maximum data             |                        |
|---------------------------------|------------------------|
| Water year Date Gage heigh      | t (ft) Discharge (cfs) |
| 1956 Mar. 17, 1956 1.60         | 207                    |
| 1957 June 16, 1957 1.5          | 188                    |
| 1958 May 23, 1958 .1            | 7 17                   |
| 1959 Mar. 20, 1959 .7           | 5 65                   |
| 1960 Mar. 18, 1960 .4           | 2 33                   |
| 1961                            | (c)                    |
| 1962 Mar. 26, 1962 .28          | 3 20                   |
| 1963 Feb. 4, 1963 b 1.49        | 9 a 50                 |
| 1964 March 1964 .5 <sup>1</sup> | + a 45                 |
| 1965 April 1965 1.40            | 165                    |
| 1966 Mar. 20, 1966 .68          | 8 60                   |
| 1967 Mar. 23, 1967 b .5         | <b>&lt;</b> 5          |

a About.

b Backwater from ice.

c No evidence of flow during year.

65. Antelope Creek tributary No. 2 near Harlowton, Mont. (6-1208)

Location .-- Lat 46°28', long 109°49', in SE4 sec. 10, T.8 N., R.15 E., at E. S. Bacon ranch, 12 miles north of Harlowton.

Drainage area. -- 21.2 sq mi.

Records available .-- July 1955 to

Gage .-- Crest-stage gage installed July 13, 1955. Altitude of gage is 4,250 ft (from topographic map).

| data          |   |  |
|---------------|---|--|
| Date          | Gage height (ft)                              | Discharge (cfs)  |
| June 15, 1956 | 3.51  | 820  |
| June 21, 1957 | 1.95  | 190  |
| June 1958     | •36   | 35   |
| Mar. 20, 1959 | •57   | 80   |
| 2000 2000     | (f)   | <b>&lt;</b> 25   |
| time time     | (f)   | <b>&lt;</b> 25   |
| June 16, 1962 | 5.56  | 3,230  |
| Feb. 4, 1963  | b .61   | a 20   |
|               |   | a 130  |
| June 12, 1965 | 3.79  | 922  |
| ,             | (f)   | <b>&lt;</b> 50   |
| June 13, 1967 | 1.32  | 125  |
|               | <u>Date</u><br>June 15, 1956<br>June 21, 1957 | Date June 15, 1956 June 21, 1957 June 1958 Mar. 20, 1959  (f) June 16, 1962 Feb. 4, 1963 June 8, 1964 June 12, 1965 (f) 3.51 1.95 3.6 Mar. 20, 1959 (f) 5.56 Feb. 4, 1963 June 8, 1964 June 12, 1965 (f) |

### 66. Antelope Creek at Harlowton, Mont. (6-1209)

Location. -- Lat 46°26', long 109°49', in NE sec. 22, T.8 N., R.15 E., on overpass on U. S. Highway 12 at Harlowton.

<u>Drainage area.--88.7 sq mi.</u>
<u>Records available.--July 1955 to</u>

Gage .-- Crest-stage gage installed July 12, 1955. Altitude of gage is 4,150 ft (from topographic map).

| Annual maximum | <u>data</u>     |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs) |
| 1950           | e June 17, 1950 | 16.73            | 24,400          |
| 1954           | e Aug. 15, 1954 | 4.52             | 1,600           |
| 1955           | e June 26, 1955 | 3.01             | 591             |
| 1956           | June 15, 1956   | 3.28             | 800             |
| 1957           | June 21, 1957   | 1.52             | 170             |
| 1958           |                 | (f)              | <30             |
| 1959           | part time       | (f)              | <30             |
| 1960           | enne more       | (f)              | <30             |
| 1961           | sum sum         | (f)              | <30             |
| 1962           | June 16, 1962   | 4.02             | 1,280           |
| 1963           | Feb. 4, 1963    | (f)              | <30             |
| 1964           |                 | (f)              | <30             |
| 1965           | June 12, 1965   | 2,2              | 318             |
| 1966           |                 | (f)              | < <u>3</u> 0    |
| 1967           | June 7, 1967    | .60              | 70              |

a About.

b Backwater from ice.

e Prior to installation of gage.

f Peak discharge did not reach bottom of gage.

# 67. Currant Creek near Roundup, Mont. (6-1263)

Location. -- Lat 46°22', long 108°39', in SW1 sec.7, T.7 N., R.25 E., at bridge on U. S. Highway 12, 7 miles southwest of Roundup.

Drainage area .-- 220 sq mi. Records available .-- May 1958 to

Gage. -- Crest-stage gage installed May 9, 1958. Altitude of gage

is 3,250 ft (from topographic map).

Cooperation .-- Montana State Water Conservation Board . Annial marimim data

| AIIIIual maximum u | <u>aua</u>    |                  |                 |
|--------------------|---------------|------------------|-----------------|
| Water year         | Date          | Gage height (ft) | Discharge (cfs) |
| 1958               | July 19, 1958 | 2.12             | a 40            |
| 1959               | Mar. 1, 1959  | 6.65             | 780             |
| 1960               | <u></u>       |                  | Unknown         |
| 1961               | July 21, 1961 | 1.86             | 31              |
| 1962               | June 15, 1962 | 5.28             | 395             |
| 1963               | June 5, 1963  | b 3.45           | a 20            |
| 1964               | June 8, 1964  | 3.80             | 140             |
| 1965               | Apr. 1, 1965  | 1.55             | 25              |
| 1966               | July 3, 1966  | 2.02             | 37              |
| 1967               | June 7, 1967  | b 9.75           | 1,620           |
|                    | •             |                  | · ·             |

# 68. South Willow Creek tributary near Roundup, Mont. (6-1271)

Location. -- Lat 46°31', long 108°35', in center E sec. 28, T.9 N., R. 25 E., at culvert on U. S. Highway 87 between Roundup and Grass Range, 4½ miles north of Roundup.

<u>Drainage area.--1.38</u> sq mi.

Records available .-- May 1962 to

Gage. -- Crest-stage gage installed Apr. 28, 1963. Altitude of gage is 3,450 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1962           | May 13, 1962  | 8.34             | 1+1+1+          |
| 1963           |               | ·                | (c)             |
| 1964           | June 8, 1964  | 1.77             | 45              |
| 1965           | July 27, 1965 | 9.90             | 510             |
| 1966           | July 3, 1966  | 4.94             | 210             |
| 1967           | June 7, 1967  | 1.75             | 45              |
|                |               |                  |                 |

a About.

b Backwater from ice or debris.

c No evidence of flow during year.

69. Musselshell River tributary near Musselshell, Mont. (6-1272)

Location. -- Lat 46°30', long 108°15', in SW sec.30, T.9 N., R.28 E., at bridge on U. S. Highway 12, 7.0 road miles east of Gage railroad siding, 2.0 miles west of road to Delphia, and 8 miles west of Musselshell.

<u>Drainage area.--10.8 sq mi.</u> <u>Records available.--May 1963 to</u>

Gage. -- Crest-stage gage installed May 15, 1963. Altitude of gage

is 3,070 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1963           |               | ←-               | (c)             |
| 1964           |               |                  | (c)             |
| 1965           | April 1965    | 1.73             | 150             |
| 1966           | Mar. 10, 1966 | .96              | 22              |
| 1967           | March 1967    | * 1.1-g+         | <1              |

# 70. Home Creek near Melstone, Mont. (6-1275.3)

Location. -- Lat 46°38', long 107°47', in NE sec. 14, T.10 N., R.31 E., at bridge on U. S. Highway 12, 2.2 miles east of Musselshell River bridge, 5 miles northeast of Melstone, and 11 miles west of Sumatra.

Drainage area.--31.2 sq mi.

Records available.--May 1963 to September 1967 (discontinued).

Gage.--Crest-stage gage installed May 16, 1963. Altitude of gage is 2,860 ft (from topographic map).

| Annual maximum | <u>aata</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1963           |               |                  | (c)             |
| 1964           |               |                  | (c)             |
| 1965           | May 7, 1965   | 3.47             | a 95            |
| 1966           | July 13, 1966 | 5.98             | 252             |
| 1967           | June 4, 1967  | 3.18             | a 75            |
| , - 1          | , , , ,       | •                |                 |

a About.

c No evidence of flow during year.

# 71. Butts Coulee near Melstone, Mont. (6-1275.7)

Location. -- Lat  $46^{\circ}39^{\circ}$ , long  $107^{\circ}49^{\circ}$ , in center  $E^{\frac{1}{2}}$  sec. 9, T.10 N., R.31 E., at culvert on county road, 2.8 miles north of U. S. Highway 12, 4 miles northeast of Melstone.

Drainage area. -- 5.96 sq mi.

Records available. -- May 1963 to . Prior to 1966, published as Musselshell River tributary No. 2 near Melstone.

Gage.--Crest-stage gage installed May 16, 1963. Altitude of gage
is 2,810 ft (from topographic map).

Annual maximum data. --

| Date G        | lage height (ft)   | Discharge (cfs)  |
|---------------|--|--|
| May 11, 1963  | 2.67   | 64   |
| Aug. 20, 1964 | 3 • 53   | 100  |
| June 15, 1965 | 3.9  | 114  |
| Mar. 8, 1966  | 1.21   | 20   |
| June 18, 1967 | 2.60   | 62   |
|               | May 11, 1963<br>Aug. 20, 1964<br>June 15, 1965<br>Mar. 8, 1966 | May 11, 1963 2.67 Aug. 20, 1964 3.53 June 15, 1965 3.9 Mar. 8, 1966 1.21 |

# 72. South Fork Bear Creek near Roy, Mont. (6-1284)

Location. -- Lat 47°12', long 108°48', in SW<sup>1</sup>/<sub>4</sub> sec.28, T.17 N., R.23 E., at bridge on State Highway 19, 10.2 miles south of U. S. Highway 191, 11.2 miles north of U. S. Highway 87 and State Highway 18, 12 miles southeast of Roy, and 12 miles north of Grass Range.

Drainage area. -- 39.6 sq mi.

Records available. -- June 1962 to

Gage. -- Crest-stage gage installed May 15, 1963. Altitude of gage is 3,250 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1962           | June 15, 1962 | 2.67             | 225             |
| 1963           | May 11, 1963  | . 1.37           | . 30            |
| 1964           | June 8, 1964  | 5.05             | 1,490           |
| 1965           | April 1965    | 2.55             | 200             |
| 1966           | July 3, 1966  | 2.86             | 265             |
| 1967           | June 9, 1967  | 1.78             | 75              |
| = / 0 /        |               | •                | • •             |

73. South Fork Bear Creek tributary near Roy, Mont. (6-1285)

Location. -- Lat 47°14', long 108°48', in SW4 sec.16, T.17 N., R.23 E., at culvert on State Highway 19, 8.7 road miles south of U. S. Highway 191, 1.7 miles north of South Fork Bear Creek, 10½ miles southeast of Roy, and 14 miles north of Grass Range.

Drainage area. -- 5.40 sq mi.

Records available. -- June 1962 to Gage. -- Crest-stage gage installed May 14, 1963. Altitude of gage

is 3,300 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1962           | June 15, 1962 | 1.90             | 28              |
| 1963           | June 25, 1963 | .42              | 1               |
| 1964           | July 5, 1964  | 2.88             | 63              |
| 1965           | April 1965    | 2.78             | 59              |
| 1966           | July 3, 1966  | 2.65             | 53              |
| 1967           | May 1967      | 1.33             | <b>1</b> 5      |
|                |               |                  |                 |

74. Box Elder Creek tributary near Winnett, Mont. (6-1289)

Location. -- Lat 47°01', long 108°10', in SW4NW4 sec. 34, T.15 N., R.28 E., a quarter of a mile north of State Highway 20 and 8 miles east of Winnett.

Drainage area. -- 16.2 sq mi.

Records available. -- July 1955 to

Gage. -- Crest-stage gage installed July 14, 1955. Altitude of gage is 2,740 ft (from topographic map).

Annual maximum data .--<u>Date</u> Aug. 23, 1955 June 18, 1956 Gage height (ft) Water year Discharge (cfs) 1955 1956 132 2.20 123 2.11 Feb. 28, 1957 1957 .66 27 July 31, 1958 1958 2.86 193 412 1959 Mar. 1, 1959 3.86 1960 Mar. 18, 1960 · 275 3.37 Aug. 10, 1961 .90 ъ 8.3 40 1961 June 15, 1962 May 11, 1963 May 3, 1964 March 1965 March 1966 a 125 1962 2.87 1963 194 1.89 1964 105 1965 b 3.84 a 200 b 1.36 1966 a 30 100 May 11, 1967 1.83 1967

a About.

b Backwater from ice.

75. North Fork McDonald Creek tributary near Heath, Mont. (6-1291)

Location.--Lat  $47^{\circ}0^{4}$ , long  $109^{\circ}13^{\circ}$ , in NE $\frac{1}{4}$  sec.17, T.15 N., R.20 E., at culvert on U. S. Highway 87 and State Highway 20, 5 miles northeast of Heath.

<u>Drainage area.--2.24</u> sq mi. <u>Records available.--May 1959</u> to

Gage. -- Crest-stage gage installed May 19, 1959. Altitude of gage is 4,280 ft (from topographic map).

| <u>uata</u>   |   |   |
|---------------|---|---|
| Date          | Gage height (ft)  | Discharge (cfs)   |
| Mar. 18, 1960 | 1.04  | Not determined  |
| Oct. 1, 1960  | .02   | Not determined  |
| May 21, 1962  | 1.21  | Not determined  |
| May 12, 1963  | •38   | Not determined  |
| June 8, 1964  | 1.51  | Not determined  |
| March 1965    | •90   | Not determined  |
| Mar. 31, 1966 | .96   | Not determined  |
| April 1967    | .83   | Not determined  |
|               | Date Mar. 18, 1960 Oct. 1, 1960 May 21, 1962 May 12, 1963 June 8, 1964 March 1965 Mar. 31, 1966 | Date Mar. 18, 1960 Oct. 1, 1960 May 21, 1962 May 12, 1963 June 8, 1964 March 1965 Mar. 31, 1966  Gage height (ft)  1.04 0.02 1.21 1.21 1.21 1.38 1.51 1.51 1.51 1.51 1.51 1.51 1.51 1.5 |

#### 76. Alkali Creek near Heath, Mont. (6-1292)

Location. -- Lat 47°05', long 109°09', in SE sec.11, T.15 N., R.20 E., at bridge on county road, 7½ miles northeast of Heath.

<u>Drainage area.--3.76</u> sq mi. <u>Records available.--May 1959</u> to

Gage.--Crest-stage gage installed May 19, 1959. Altitude of gage
is 4,060 ft (from topographic map).
Appual maximum data --

| Allilual maximum da | <u>a (a • </u> |                  |                 |
|---------------------|----------------|------------------|-----------------|
| Water year          | Date ·         | Gage height (ft) | Discharge (cfs) |
| 1960                | Mar. 18, 1960  | 1.83             | a 60            |
| 1961                | Feb. 20, 1961  | b .62            | a 15            |
| 1962                | June 15, 1962  | 7.4              | 757             |
| 1963                |                |                  | <1              |
| 1964                | June 8, 1964   | 4.12             | a 120           |
| 1965                | March 1965     | 2.59             | a 55            |
| 1966                | Mar. 10, 1966  | 1.51             | <b>a</b> 60     |
| 1967                | June 7, 1967   | •36              | 19              |

77. South Fork McDonald Creek tributary near Grassrange, Mont. (6-1294)

Location. -- Lat 47°00', long 108°47', in center of sec.3, T.14 N., R.23 E., at culvert on U. S. Highway 87, 1.4 road miles south of the approach road to Grassrange, 1½ miles southeast of Grassrange.

Drainage area. -- 0.51 sq mi.

Records available .-- May 1963 to

Gage.--Crest-stage gage installed May 15, 1963. Altitude of gage
is 3,700 ft (from topographic map).
Annual maximum data.--

| THE THEOLET MICHAELINGIA | ua va         |                   |                 |
|--------------------------|---------------|-------------------|-----------------|
| Water year               | Date          | Gage height (ft)  | Discharge (cfs) |
| 1963                     | June 29, 1963 | 0.16              | 6               |
| 1964                     | June 8, 1964  | 2.42              | 38              |
| 1965                     | March 1965    | • <del>/+</del> O | 8               |
| 1966                     | March 1966    | b 1.30            | a l             |
| 1967                     | June 14, 1967 | •95               | 15              |
| •                        | , , ,         |                   | •               |

a About.

b Backwater from ice.

# 78. McDonald Creek at Winnett, Mont. (6-1295)

Location. --Lat 47°00', long 108°21', in NW4 sec.7, T.14 N., R.27 E., at bridge on State Secondary Highway 244, three-quarters of a mile south of Winnett.

Drainage area. -- 421 sq mi.

Records available .-- April 1930 to December 1932, February 1934 to September 1945, and February 1953 to September 1956 (continuous record), October 1956 to

Gage. -- Crest-stage gage installed Sept. 19, 1960. Prior to Oct. 1, 1956, wire-weight gage, and Oct. 1, 1956, to March 1960, crest-stage gage 1 mile downstream at different datum. Altitude of gage is 2,930 ft (by barometer), at old site.

| Annual maximum       | <u>data</u>  |                                |                         |
|----------------------|--|--------------------------------|-------------------------|
| Water year           | Date   | Gage height (ft)               |                         |
| 1931                 | Mar. $\frac{2}{1-3}$ , 1931                                    | 13.30                          | d 4.2                   |
| 1932                 | June 9, 1932   | 20.40                          | d 562<br>d 351<br>d 371 |
| 1934                 | June 9, 1934   | 18.12                          | d 35±                   |
| 1935                 | July 8, 1935   | 18.30                          | a 371                   |
| 1936<br>1937         | Mar. 7, 1930   | 18.75                          | a 220<br>401            |
| 1938                 | Mar. 5, 1936<br>July 13, 1937<br>July 8, 1938                  | 18.71                          | d 328                   |
| 1939                 | June 19, 1939  | 4.55                           | 270                     |
| 1940                 | June 19, 1939<br>Mar. 3, 1940<br>June 28, 1941                 |                                | a 75                    |
| 1 O77                | June 28, 1941  | 5.42                           | 482                     |
| 1942                 | May 15 or 16, 19   | 42 7.5<br>3 5.59               | 900                     |
| 1943<br>1944         | May 15 or 16, 194  | 3 5•59 ·                       | d 549                   |
| 1944                 | Jiine 20. 1944   | 7,40                           | 853                     |
| 1945<br>1953<br>1954 | June 7, 1945   | 2.48<br>5.66                   | d 180<br>d 424          |
| 1973                 | A110 5 1955  | 3.00                           | 47                      |
| 1955                 | June 7, 1945 June 10, 1953 Aug. 5, 1954 Apr. 11, 1955          | 3.00<br>4.39                   | 241                     |
| 1956                 | Aug. 3. 1956   | 2.55                           | 88                      |
| 1956<br>1957         | Mar. 19, 1957  | 2.20                           | 67                      |
| 1958                 | July 19, 1958  | 3.23                           | 150                     |
| 1959                 | Aug. 3, 1956<br>Mar. 19, 1957<br>July 19, 1958<br>Mar. 1, 1959 | 2.55<br>2.20<br>3.23<br>b 6.84 | a 400                   |
| 1960                 | Mar. 19. 1960  | 4 • 44                         | a 200                   |
| 1961                 | Mar. 20, 1961<br>June 17, 1962                                 | 1.25                           | ). O C • <del>L</del>   |
| 1962                 | June 17, 1962  | 4.20                           | 485                     |
| 1963<br>1964         | Feb. 4, 1963<br>June 10, 1964                                  | a 10.0                         | a 250<br>1,440          |
| 1965                 | March 1965   | b 7.70                         | a 800                   |
| 1966                 | Mar. 9, 1966   |                                | a 200                   |
| 1967                 | June 16, 1967  | 6.83                           | 890                     |

b Backwater from ice or beaver dam.

d Maximum observed.

# 79. Gorman Coulee near Cat Creek, Mont. (6-1297)

Location. -- Lat 47°01', long 108°06', in SW\(\frac{1}{4}\)SW\(\frac{1}{4}\) sec.31, T.15 N., R.29 E., at culvert on State Highway 20, 6 miles southwest of Cat Creek.

Drainage area. -- 2.32 sq mi.

Records available .-- July 1955 to

Gage.--Crest-stage gage installed July 14, 1955. Altitude of gage is 2,740 ft (from topographic map).

| Annual maximum | data          |                    |                 |
|----------------|---------------|--------------------|-----------------|
| Water year     | Date          | Gage height (ft)   | Discharge (cfs) |
| 1955           | Aug. 23, 1955 | 5.59               | 385             |
| 1956           | June 18, 1956 | 2.73               | 126             |
| 1957           | Aug. 30, 1957 | 1.37               | 43              |
| 1958           | July 19, 1958 | 2.09               | 83              |
| 1959           | June 26, 1959 | 1.84               | 68              |
| 1960           | <u></u>       |                    | Unknown         |
| 1961           |               |                    | (c)             |
| 1962           | May 16, 1962  | 1.06               | 28              |
| 1963           |               | tim inco           | <b>&lt;</b> 5   |
| 1964           | Aug. 20, 1964 | 1.89               | 70              |
| 1965           | July 10, 1965 | 4.05               | 237             |
| 1966           | March 1966    | · 1 <sup>1</sup> + | 5               |
| 1967           | June 7, 1967  | 5.00               | 328             |
|                |               |                    |                 |

80. Gorman Coulee tributary near Cat Creek, Mont. (6-1298)

Location. -- Lat 47°01', long 108°06', in SE4SW4 sec.31, T.15 N., R.29E., at culvert on State Highway 20, 6 miles southwest of Cat Creek.

<u>Drainage area.--0.81</u> sq mi. <u>Records available.--May 1955</u> to

Gage.--Crest-stage gage installed May 27, 1955. Altitude of gage is 2,760 ft (from topographic map).

| Annual maximum | <u>data</u>    |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1955           | Aug. 23, 1955  | 3.02             | 159             |
| 1956           | June 18, 1956  | • 96             | 32              |
| 1957           | Aug. 30, 1957  | 1.24             | 1414            |
| 1958           | July 31, 1958  | 2.52             | 122             |
| 1959           | Sept. 22, 1959 | .28              | 10              |
| 1960           | Mar. 18, 1960  | •37              | 12              |
| 1961           | Aug. 10, 1961  | • 50             | 15              |
| 1962           | May 16, 1962   | •55              | 17              |
| 1963           | <u></u>        |                  | <b>&lt;</b> 5   |
| 1964           | Aug. 20, 1964  | 1.85             | <del>7</del> 8  |
| 1965           | July 10, 1965  | 2.74             | 133             |
| 1966           | Mar. 9, 1966   | b .52            | a 5             |
| 1967           | June 7, 1967   | 4.14             | 230             |

a About.

b Backwater from ice.

c No evidence of flow during year.

#### 81. Cat Creek near Cat Creek, Mont. (6-1306)

Location .-- Lat 47°03', long 108°01', in SW1 sec.23, T.15 N. R.29 E. at culvert on county road, 2½ miles south of Cat Creek.

Drainage area. -- 36.5 sq mi.
Records available -- April 1958 to

Gage .-- Crest-stage gage installed Apr. 19, 1958. Altitude of gage is 2,650 ft (from topographic map).

Cooperation .-- Montana State Water Conservation Board .

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1958           | Aug. 15, 1958 | 2.76             | 92              |
| 1959           | Mar. 12, 1959 | 4.58             | 170             |
| 1960           | Mar. 18, 1960 | 5.85             | 379             |
| 1961           | June 23, 1961 | 1.27             | 40              |
| 1962           | June 16, 1962 | 6.19             | 748             |
| 1963           | June 29, 1963 | •72              | 26              |
| 1964           | Aug. 20, 1964 | 2.61             | 90              |
| 1965           | May 7, 1965   | 3 <b>.</b> 56    | 125             |
| 1966           | Mar. 10, 1966 | 1.35             | 43              |
| 1967           | June 7, 1967  | •55              | 13              |
|                |               |                  |                 |

#### 82. Second Creek tributary near Jordan, Mont. (6-1308)

Location. -- Lat  $47^{\circ}12^{\circ}$ , long  $106^{\circ}48^{\circ}$ , in  $NW_{4}^{1}NW_{4}^{1}$  sec. 31, T.17 N., R.39 E., at culvert on State Highway 22, 11 miles southeast of Jordan.

Drainage area. -- 0.75 sq mi.

Records available. -- March 1958 to

Gage. -- Crest-stage gage installed Mar. 18, 1958. Altitude of gage is 2,750 ft (from topographic map).

Cooperation .-- Montana State Water Conservation Board .

| Annual maximum | <u>data</u>     |                  |                  |
|----------------|-----------------|------------------|------------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs)  |
| 1954           | e Aug. 16, 1954 | 9.64             | 334              |
| 1958           |                 |                  | (c)              |
| 1959           | Mar. 17, 1959   | . 1.22           | 13               |
| 1960           | Mar. 18, 1960   | 1.75             | 21               |
| 1961           |                 | nin one          | (c)              |
| 1962           | Mar. 18, 1962   | 1.10             | 12               |
| 1963           | Feb. 4, 1963    | b 2.00           | a 5              |
| 1964           | June 18, 1964   | 9.62             | 304              |
| 1965           | April 1965      | 1.58             | 18               |
| 1966           | July 2, 1966    | .91              | .8               |
| 1967           | June 7, 1967    | 1.90             | 2 <sup>1</sup> + |

a About.

b Backwater from ice.

c No evidence of flow during year.

e Prior to installation of gage; peak discharge computed from highwater marks along highway embankment at culvert.

83. Second Creek tributary No. 2 near Jordan, Mont. (6-1308.5)

Location.--Lat 47°12', long  $106^{\circ}49'$ , in  $NW_{\frac{1}{4}}$  sec.25, T.17 N., R.38 E., at culvert on State Highway 22,  $9\frac{1}{2}$  miles southeast of Jordan.

Drainage area. -- 1.90 sq mi. Records available. -- March 1958 to

Gage.--Crest-stage gage installed Mar. 18, 1958. Altitude of gage
is 2,750 ft (from topographic map).

Cooperation .-- Montana State Water Conservation Board.

| Annual maximum | data           |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1958           | June 1958      | 0.86             | 23              |
| 1959           | Mar. 17, 1959  | 1.7              | 58              |
| 1960           | Mar. 18, 1960  | 1.98             | 75              |
| 1961           | Sept. 11, 1961 | 37               | a 2             |
| 1962           | Mar. 18, 1962  | .51              | 15              |
| 1963           | Feb. 26, 1963  | .82              | 20              |
| 1964           | June 18, 1964  | 8.1+0            | 760             |
| 1965           | Mar. 31, 1965  | 1.65             | 55              |
| 1966           | July 2, 1966   | • 7+0            | 13              |
| 1967           | June 7, 1967   | •73              | 20              |
|                |                |                  |                 |

84. Second Creek tributary No. 3 near Jordan, Mont. (6-1309)

Location. -- Lat 47°13', long 106°50', in NW4 sec.23, T.17 N., R.38 E., at culvert on State Highway 22, 82 miles southeast of Jordan.

Drainage area. -- 0.60 sq mi.

Records available. -- July 1958 to

Gage. -- Crest-stage gage installed July 23, 1958. Altitude of gage is 2,780 ft (from topographic map).

Cooperation. -- Montana State Water Conservation Board.

| AIIIIUAL MAXIMUM | <u>uata</u>   |                  |                 |
|------------------|---------------|------------------|-----------------|
| Water year       | Date          | Gage height (ft) | Discharge (cfs) |
| 1958             |               |                  | (c)             |
| 1959             | Mar. 3, 1959  | 1.77             | 31              |
| 1960             | Mar. 18, 1960 | 1.03             | 18              |
| -1961            | June 1, 1961  | •23              | a 3             |
| 1962             | July 14, 1962 | .81              | 14              |
| 1963             | July 18, 1963 | • 47             | 8               |
| 1964             | June 18, 1964 | 13.32            | 458             |
| 1965             | Mar. 31, 1965 | 1.44             | 25              |
| 1966             | Mar. 10, 1966 | •39.             | 7               |
| 1967             | Mar. 22, 1967 | •75              | 13              |
| • •              | ,             |                  |                 |

a About.

c No evidence of flow during year.

# 85. Little Dry Creek near Van Norman, Mont. (6-1309.5)

Location. -- Lat 47°21', long 106°22', in SE4 sec. 4, T.18 N., R.42 E., at bridge on State Highway 20, 12 miles southeast of Van Norman. Drainage area. -- 1,224 sq mi.

Records available .-- May 1958 to

Gage .-- Crest-stage gage installed May 5, 1958. Altitude of gage is 2,350 ft (from topographic map).

Coopération .-- Montana State Water Conservation Board .

| Annual maximum | <u>lata</u>    |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | <u>Date</u>    | Gage height (ft) | Discharge (cfs) |
| 1958           | July 6, 1958   | 0.83             | 160             |
| 1959           | Mar. 18, 1959  | 6.80             | 5,200           |
| 1960           | Mar. 20, 1960  | b 7.6            | a 4,000         |
| 1961           | Sept. 11, 1961 | 3.08             | 1,320           |
| 1962           | Mar. 22, 1962  | 2.32             | 850             |
| 1963           | Feb. 6, 1963   | b 2.49           | a 800           |
| 1964           | July 5, 1964   | 2.88             | 1,200           |
| 1965           | Aug. 6, 1965   | 6.01             | g 4,300         |
| 1966           | July 3, 1966   | 4.39             | 2,450           |
| 1967           | March 1967     | b 3.19           | a <b>1</b> 600  |
|                |                |                  |                 |

# 86. Livermore Creek near Babb, Mont. (6-1322.5)

Location. -- Lat 48°46', long 113°11', in NE4 sec.28, T.35 N., R.12 W., at bridge on State Secondary Highway 464, 13½ miles southeast of Babb.

Drainage area. -- 25.0 sq mi.

Records available .-- August 1961 to September 1967 (discontinued). Gage .-- Crest-stage gage installed Aug. 13, 1961. Altitude of gage is 4,730 ft (from topographic map).

Annual maximum data

| AIHIUAI MAXIMUM | uava                                    |                  |                 |
|-----------------|---|------------------|-----------------|
| Water year      | Date                                    | Gage height (ft) | Discharge (cfs) |
| 1961            | tion time                               |                  | Unknown         |
| 1962            | Apr. 13, 1962                           | 3.43             | 152             |
| 1963            | July 5, 1963                            | . 2.62           | 75              |
| 1964            | June 8, 1964                            |                  | 4,880           |
| 1965            | May 26, 1965                            | 7.21             | 1,150           |
| 1966            | June 4, 1966                            | 7.41             | 196             |
| 1967            | May 9, 1967                             | 7.60             | a 600           |
|                 | . , , , , , , , , , , , , , , , , , , , |                  |                 |

a About.

b Backwater from ice.

g May have been greater April 1 during ice period.

# 87. Middle Fork Milk River near Babb, Mont. (6-1323)

Location. -- Lat 48°51', long 113°13', in SE sec. 30, T.36 N., R.12 W., at culvert on State Secondary Highway 464, 10 miles east of Babb. Drainage area. -- 14.0 sq mi.

Records available. -- August 1961 to September 1964 (discontinued). Gage. -- Crest-stage gage installed Aug. 13, 1961. Altitude of gage

is 4,810 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                        |
|----------------|---------------|------------------|------------------------|
| Water year     | Date          | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1961           |               | des des          | Unknown                |
| 1962           | Apr. 13, 1962 | 2.62             | 107                    |
| 1963           | July 5, 1963  | b 2.12           | a 30                   |
| 1964           | June 8, 1964  | 2.96             | <b>5</b> 58            |

# 88. Dry Fork Milk River near Babb, Mont. (6-1324)

Location. -- Lat 48°50', long 113°12', in SE½ sec.32, T.36 N., R.12 W, at bridge on State Secondary Highway 464, 11 miles east of Babb. Drainage area. -- 17.4 sq mi.

Records available .-- August 1961 to

Gage. -- Crest-stage gage installed Aug. 13, 1961. Altitude of gage is 4,750 ft (from topographic map).

Annual maximum data .--Discharge (cfs) Water year Date Gage height (ft) 1961 Unknown Apr. 13, 1962 July 5, 1963 June 8, 1964 1962 3.96 394 1963 2.41 70 1,880 1964 5.20 Apr. 26, 1965 June 4, 1966 May 8, 1967 1965 3.92 98 4.32 450 1966 1,040 1967

a About.

b Backwater from ice or debris.

# 89. Milk River near Del Bonita, Mont. (6-1327)

Location. -- Lat 48°57', long 112°45', in center of N½ sec.23, T.37 N., R.9 W., at bridge on State Secondary Highway 483, 3½ miles southeast of customs post at Del Bonita.

Drainage area. -- 325 sq mi.

Records available. -- August 1961 to September 1967 (discontinued). (Seasonal record station April 1962 to November 1964).

Gage. -- Crest-stage gage installed Aug. 12, 1961. Altitude of gage is 4,030 ft (from topographic map).

| Altitual maximum dava. | Annual | maximum | data. | - |
|------------------------|--------|---------|-------|---|
|------------------------|--------|---------|-------|---|

| Alliual maximum | uava          |                  |                 |
|-----------------|---------------|------------------|-----------------|
| Water year      | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1961            | tion tion     | tion tion        | Unknown         |
| 1962            | Apr. 14, 1962 | b 4.13           | a 800           |
| 1963            | Feb. 6, 1963  | b 5.10           | d 765           |
| 1964            | June 8, 1964  | 9.0              | 17,300          |
| 1965            | Apr. 13, 1965 | 4.87             | 1,600           |
| 1966            | June 5, 1966  | 5.39             | 2,330           |
| 1967            | May 8, 1967   | 6.98             | 6,600           |
| •               |               |                  | •               |

90. Van Cleeve Coulee tributary near Sunburst, Mont. (6-1348)

Location. -- Lat 48°53', long lll°49', on north line of NE<sup>1</sup>/<sub>4</sub> sec.14, T.36 N., R.2 W., at culverts on county road, 3.7 road miles east of interchange on Interstate 15 at Sunburst.

Drainage area. -- 10.8 sq mi.

Records available .-- April 1963 to

Gage. -- Crest-stage gage installed Apr. 17, 1963. Altitude of gage is 3,340 ft (from topographic map).

| Annual | maximum | data. |  |
|--------|---------|-------|--|
|        |         |       |  |

| 43.0 | TITUAL MARITUM | ua va •        |      |               |                 |
|------|----------------|----------------|------|---------------|-----------------|
|      | Water year     | Date           | Gage | e height (ft) | Discharge (cfs) |
|      | 1963           |                |      |               | (c)             |
|      | 1964           | May 3, 1964    |      | 2.08          | 35              |
|      | 1965           | Apr. 7, 1965   |      | 4.00          | 239             |
|      | 1966           | Mar. 9, 1966   | •    | 1.55          | 15              |
|      | 1967           | Mar. 22, 1967  |      | b 3.80        | a 11Ó           |
|      | 1707           | 11010 229 1707 |      | 2 3 4 4 4     |                 |

a About.

b Backwater from ice.

c No evidence of flow during year.

d Maximum observed.

# 91. Sage Creek tributary at Hingham, Mont. (6-1379)

Location. -- Lat 48°34', long 110°25', in center sec.3, T.32 N., R.10 E., at culvert on farm road, half a mile northeast of Hingham.

Drainage area. -- 1.08 sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 27, 1959. Altitude of gage is 3,000 ft (from topographic map).

| Annual maximum data            |                     |
|--------------------------------|---------------------|
| Water year Date Gage height (: | ft) Discharge (cfs) |
| 1960 Mar. 17, 1960 1.51        | 14                  |
| 1961                           | (c)                 |
| 1962 June 14, 1962 5.46        | 299                 |
| 1963 July 3, 1963 2.27         | 26                  |
| 1964 April 1964 .06            | .1                  |
| 1965 Apr. 9, 1965 2.71         | 45                  |
| 1966 Mar. 9, 1966 1.40         | 18                  |
| 1967 Feb. 26, 1967 1.36        | 17                  |

#### 92. South Fork Spring Coulee near Havre, Mont. (6-1387)

Location. -- Lat 48°25', long 109°50, in NE 4 sec. 31, T.31 N., R.15 E., at culvert on county road, 12 miles southwest of Havre.

Drainage area. -- 6.47 sq mi.

Records available. -- May 1959 to Gage. -- Crest-stage gage installed May 26, 1959. Altitude of gage is 2,770 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1960           | Mar. 17, 1960 | 2.04             | 33              |
| 1961           | May 31, 1961  | • O)+            | 2               |
| 1962           | Mar. 18, 1962 | 1.68             | 25              |
| 1963           | June 22, 1963 | 2.06             | 34              |
| 1964           | May 3, 1964   | .10              | 2               |
| 1965           | April 1965    | 2.47             | 7+7+            |
| 1966           | Mar. 9, 1966  | 4.42             | 190             |
| 1967           | Feb. 27, 1967 | 3.15             | 59              |

c No evidence of flow during year.

# 93. Spring Coulee near Havre, Mont. (6-1388)

Location. -- Lat 48°25', long 109°52', in NW sec. 25, T.31 N., R.14 E., at culverts on county road, 13 miles southwest of Havre.

Drainage area. -- 17.8 sq mi.

Records available. -- May 1959 to Gage. -- Crest-stage gage installed May 26, 1959. Altitude of gage is 2,670 ft (from topographic map).

| Annual maximum | <u>data</u>     |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | <u>Date</u>     | Gage height (ft) | Discharge (cfs) |
| 1959           | e Mar. 11, 1959 | 5.60             | 257             |
| 1960           | Mar. 17, 1960   |                  | a 10            |
| 1961           |                 |                  | (c)             |
| 1962           | Mar. 18, 1962   | 1.32             | 48              |
| 1963           | Feb. 3, 1963    | 1.35             | 46              |
| 1964           |                 |                  | (c)             |
| 1965           | Apr. 6, 1965    | 2.01             | 77              |
| 1966           | Mar. 9, 1966    | 6.24             | 345             |
| 1967           | Mar. 22, 1967   | 3.41             | 146             |

a About.

c No evidence of flow during year.

e Prior to installation of gage; peak discharge computed from highwater marks along highway embankment at culvert.

94. Big Sandy Creek near Assinniboine, Mont. (6-1395)

Location .- Lat 48°32', long 109°50', in SW+SW+ sec.18, T.32 N., R.15 E., 2 miles northwest of Assinniboine.

Drainage area. -- 1,805 sq mi.

Records available. -- February 1946 to November 1953 (continuous record), April 1955 to September 1967 (discontinued).

Gage. -- Water-stage recorder re-installed Apr. 9, 1955. Altitude of gage is 2,510 ft (by barometer).
Annual maximum data.--

| Annual maximum | <u>aata</u>                    |                  |                 |
|----------------|--------------------------------|------------------|-----------------|
| Water year     | Date                           | Gage height (ft) | Discharge (cfs) |
| 1946           | Feb. 27, 1946                  |                  | h 86            |
| 1947<br>1948   | Mar. 21, 1947                  | 9.68             | i 2,080         |
| 1949           | Mar. 22, 1948<br>Mar. 31, 1949 | <del></del>      | h 17<br>h 5     |
| 1950           | Mar. 29, 1950                  | 3.88             | 208             |
| 1951           | Mar. 23, 1951                  | 5.01             | 391             |
| 1952           | Apr. 3. 1952                   | 14.70            | 5,570           |
| 1953           | June 6, 1953                   | 6.56             | 714             |
| 1954           |                                | <u></u>          | Unknown         |
| 1955           | Apr. 11, 1955                  | 6.48             | 698             |
| 1956<br>1957   | Mar. 30, 1956                  | b 6.47<br>b 5.13 | a 550<br>a 250  |
| 1958           | Feb. 28, 1957<br>Mar. 28, 1958 | D 7.T2           | a 500           |
| 1959           | Mar. 11, 1959                  | 7.80             | 1,100           |
| 1960           | Mar. 25, 1960                  | a 4.1            | 215             |
| 1961           | June 3, 1961                   | 3.64             | 132             |
| 1962           | June 12, 1962                  | 2.54             | 6               |
| 1963           | Feb. 6, 1963                   | 2.16             | .1              |
| 1964<br>1965   | May 19, 1964<br>Apr. 12, 1965  | 6.62             | 700             |
| 1966           | Mar. 9, 1966                   | 11.31            | 2,950<br>1,200  |
| 1967           | June 13, 1967                  | 6.08             | 630             |
| -/-/           | -5, -/-/                       | *                | 000             |

a About.

b Backwater from ice.

h Maximum daily.

i Maximum recorded.

#### 95. Bullhook Creek near Havre, Mont. (6-1404)

Location. -- Lat 48°31', long 109°38', in NE sec. 27, T.32 N., R.16E., at bridge on county road, 3½ miles south of Havre.

<u>Drainage area</u>.--39.6 sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 26, 1959. Altitude of gage is 2,610 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           | Mar. 18, 1960 | 1.84             | 85              |
| 1961           |               |                  | (c)             |
| 1962           | Mar. 18, 1962 | 1.49             | 55              |
| 1963           | Feb. 24, 1963 | .86              | 13              |
| 1964           | May 4, 1964   | 1.38             | <sup>1</sup> +7 |
| 1965           | Aug. 23, 1965 | 3.68             | 250             |
| 1966           | Mar. 9, 1966  | 3.87             | 265             |
| 1967           | Mar. 22, 1967 | 2.44             | 135             |

# 96. Milk River tributary near Lohman, Mont. (6-1419)

Location. -- Lat 48°35', long 109°26', in SW sec. 30, T.33 N., R.18E., at culvert on U. S. Highway 2, 1.2 miles west of Lohman.

Drainage area. -- 0.16 sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 26, 1959. Altitude of gage is 2,450 ft (from topographic map).

| d) |
|----|
|    |
|    |
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|    |
|    |
|    |
|    |

a About. c No evidence of flow during year.

Location. -- Lat 48°13', long 108°02', in NE sec.1, T.28 N., R.28 E., at bridge on U. S. Highway 191, 12 miles southwest of Malta.

Drainage area. -- 6.64 sq mi.

Records available. -- July 1955 to September 1967 (discontinued).

Gage. -- Crest-stage gage installed July 27, 1955. Altitude of gage is 2,450 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1956           | July 3, 1956  | 1.98             | a 100           |
| 1957           | Mar. 19, 1957 | 1.85             | a 90            |
| 1958           | April 1958    | 1.02             | 28              |
| 1959           | Mar. 13, 1959 | ъ 2.93           | a 60            |
| 1960           | Mar. 18, 1960 | b 3.21           | Not determined  |
| 1961           | May 30, 1961  | 1.04             | 29              |
| 1962           | July 18, 1962 | 2.96             | a 200           |
| 1963           | Feb. 5, 1963  | b 2.93           | Not determined  |
| 1964           | May 3, 1964   | 3.16             | a 220           |
| 1965           | May 7, 1965   | 2.45             | a <b>1</b> 50   |
| 1966           | March 1966    | .91              | 23              |
| 1967           | March 1967    | b2.68            | a 50            |
|                |               |                  |                 |

#### 98. Alkali Creek near Malta, Mont. (6-1552)

Location. -- Lat 48°16', long 107°58', near center sec.16, T.29 N., R.29 E., at bridge on U. S. Highway 191, 84 miles southwest of Malta.

<u>Drainage area.--162</u> sq mi.

Records available .-- July 1955 to

Gage. -- Crest-stage gage installed July 27, 1955. Altitude of gage is 2,270 ft (from topographic map).

|   | (s) |
|---|-----|
| 300/                                    |     |
| 1956 Mar. 19, 1956 b 0.85 a 45          |     |
| 1957 Mar. 21, 1957 1.69 355             |     |
| 1958 Mar. 25, 1958 .82 104              |     |
| . 1959 Mar. 13, 1959 b 3.0 a 800        |     |
| 1960 Unknown                            |     |
| 1961 (f) <220                           |     |
| 1962 July 14, 1962 2.68 750             |     |
| 1963 Feb. 5, 1963 b 3.09 a 700          |     |
| 1964 May 4, 1964 1.36 245               |     |
| 1965 April 1965 a 4.0 Not determine     | ed  |
| 1966 (f) <10                            |     |
| 1967 Mar. 22, 1967 b 4.43 Not determine | d   |

a About.

b Backwater from ice.

f Peak discharge did not reach bottom of gage.

#### 99. Disjardin Coulee near Malta, Mont. (6-1553)

Location. -- Lat 48°16', long 107°58', in SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.16, T.29 N., R.29 E., at bridge on U. S. Highway 191, 8 miles southwest of Malta.

Drainage area. -- 3.42 sq mi.

Records available .-- July 1955 to

Gage. -- Crest-stage gage installed July 26, 1955. Altitude of gage is 2,290 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1956           | Aug. 5, 1956  | 3.22             | 160             |
| 1957           | Mar. 19, 1957 | 1.02             | 22              |
| 1958           |               | -                | (c)             |
| 1959           | Mar. 18, 1959 | 1.62             | 132             |
| 1960           | Mar. 18, 1960 | .61              | 32              |
| 1961           | May 30, 1961  | * 1+1+           | 20              |
| 1962           | July 18, 1962 | 2.23             | a 200           |
| 1963           | Feb. 5, 1963  | b 3.25           | a 100           |
| 1964           | Aug. 20, 1964 | 38               | 7               |
| 1965           | Apr. 12, 1965 | 5.15             | a 360           |
| 1966           | March 1966    | 1.37             | 34              |
| 1967           | Mar. 22, 1967 | 1.89             | 90              |
| =/0/           |               |                  | , -             |

100. South Fork Taylor Creek near Malta, Mont. (6-1554)

Location.--Lat 48°19', long 107°55', in SE½ sec.26, T.30 N., R.29 E., at bridge on U. S. Highway 191, 3½ miles southwest of Malta. Drainage area.--5.08 sq mi.

Records available .-- July 1955 to

Gage.--Crest-stage gage installed July 28, 1955. Altitude of gage is 2,290 ft (from topographic map).
Annual maximum data.--

| Ammaa maximam | <u>uava</u> • |                  |                 |
|---------------|---------------|------------------|-----------------|
| Water year    | Date          | Gage height (ft) | Discharge (cfs) |
| 1956          | Mar. 19, 1956 | 1.75             | 52              |
| 1957          | Mar. 19, 1957 | 1.43             | 22              |
| 1958          |               |                  | (c)             |
| 1959          | July 13, 1959 | 1.94             | 84              |
| 1960          | Mar. 18, 1960 | ` 1 <b>.</b> 89  | 75              |
| 1961          | July 30, 1961 | •90              | 2               |
| 1962          | July 18, 1962 | 1.54             | 65              |
| 1963          | Feb. 5, 1963  | •95              | 20              |
| 1964          |               |                  | (c)             |
| 1965          | Apr. 12, 1965 | •68              | <1              |
| 1966          |               | year even        | (c)             |
| 1967          | Mar. 22, 1967 | b 2.16           | a 70            |
| =/ =/         |               |                  |                 |

a About.

b Backwater from ice.

c No evidence of flow during year.

### 101. Unger Creek near Vandalia, Mont. (6-1723)

Location. -- Lat  $48^{\circ}22^{\circ}$ , long  $106^{\circ}48^{\circ}$ , in  $SW_{\frac{1}{2}}^{\frac{1}{2}}$  sec. 9, T.30 N., R.38 E., at bridge on U. S. Highway 2,  $4\frac{1}{2}$  miles northeast of Vandalia.

<u>Drainage area.--11.1</u> sq mi.

<u>Records available.--April 1958 to</u>

Gage.--Crest-stage gage installed Apr. 15, 1958. Altitude of gage
is 2,220 ft (from topographic map).

Cooperation .-- Montana State Water Conservation Board.

| Annual maximum | data          |                  |                        |
|----------------|---------------|------------------|------------------------|
| Water year     | <u>Date</u>   | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1958           | March 1958    | 0.92             | 10                     |
| 1959           | Apr. 1, 1959  | 1.1+1            | 32                     |
| 1960           | Mar. 20, 1960 | 2.32             | 225                    |
| 1961           | June 13, 1961 | 1.02             | 13                     |
| 1962           | July 14, 1962 | 3.28             | 575                    |
| 1963           | June 29, 1963 | 2.23             | 46                     |
| 1964           | July 19, 1964 | 1.20             | 12                     |
| 1965           | May 6, 1965   | 2.63             | 330                    |
| 1966           | March 1966    | 1.15             | 10                     |
| 1967           | Mar. 27, 1967 | b 2.75           | a 100                  |
|                | •             |                  |                        |

## 102. Mooney Coulee near Tampico, Mont. (6-1723.5)

Location. -- Lat  $48^{\circ}17^{\circ}$ , long  $106^{\circ}42^{\circ}$ , in  $NW_{4}^{\frac{1}{4}}$  sec. 7, T. 29 N., R. 39 E., at bridge on U. S. Highway 2,  $5\frac{1}{2}$  miles east of Tampico.

Drainage area.--12.8 sq mi.

Records available .-- August 1960 to

Gage. -- Crest-stage gage installed Aug. 24, 1960. Altitude of gage is 2,220 ft (from topographic map).

Cooperation. -- Montana State Water Conservation Board.
Annual maximum data. --

| AILIUAL MAAIMUM | ua va •       |                   |                        |
|-----------------|---------------|-------------------|------------------------|
| Water year      | Date          | Gage height (ft)  | <u>Discharge (cfs)</u> |
| 1960            | tree tree     |                   | Unknown                |
| 1961            | June 13, 1961 | 2.37              | 400                    |
| 1962            | July 14, 1962 | 2.20              | 220                    |
| 1963            | Feb. 5, 1963  | b 1.30            | a 50                   |
| 1964            |               |                   | (c)                    |
| 1965            | May 1965      | .l <sup>)</sup> + | <1                     |
| 1966            | July 13, 1966 | • <sup>1</sup> +O | _ 2                    |
| 1967            | Mar. 27, 1967 | b 1.35            | 85                     |
|                 | •             |                   |                        |

a About.

b Backwater from ice.

c No evidence of flow during year.

103. Milk River tributary No. 2 near Glasgow, Mont. (6-1724)

Location. -- Lat 48°15', long 106°41', in center of sec.29, T.29 N., R.39 E., at bridge on U. S. Highway 2, 3½ miles northwest of Glasgow.

Drainage area. --

Records available. -- June 1958 to August 1960 (discontinued).

Gage.--Crest-stage gage installed June 28, 1958.
Annual maximum data.--

| Water year | Date         | Gage height (ft) | Discharge (cfs) |
|------------|--------------|------------------|-----------------|
| 1958       |              |                  | Unknown         |
| 1959       | Apr. 1, 1959 | 1.79             | Unknown         |

104. East Fork Sand Creek near Vida, Mont. (6-1755.5)

Location. -- Lat 47°48', long 105°37', in NW sec.31, T.24 N., R.48 E., at culverts on county road, 5.8 road miles west from State Highway 13 on Sand Creek road, 6 miles southwest of Vida.

Drainage area. -- 8.51 sq mi.

Records available .-- May 1963 to

Gage. -- Crest-stage gage installed May 18, 1963. Altitude of gage

is 2,200 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1963           | June 6, 1963  | 4.88             | 600             |
| 1964           | June 18, 1964 | 1.24             | 94              |
| 1965           | Apr. 2, 1965  |                  | a 250           |
| 1966           | July 2, 1966  | 5.9              | 1,180           |
| 1967           | March 1967    | <b>1.2</b> 3     | <sup>2</sup> 94 |

Location. -- Lat 48°23', long 106°00', in SW1 sec.3, T.30 N., R.44 E., at bridge on county road, 5 miles west of Lustre.

<u>Drainage area.--6.57</u> sq mi. <u>Records available.--June 1955</u> to September 1967 (discontinued). <u>Gage.--Crest-stage</u> gage installed Jnne 9, 1955. Altitude of gage

is 2,740 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1956           | June 26, 1956 | 0.89             | Not determined  |
| 1957           | Apr. 23, 1957 | 2.24             | Not determined  |
| 1958           |               |                  | (c)             |
| 1959           | Mar. 25, 1959 | .68              | Not determined  |
| 1960           | Mar. 18, 1960 | 1.99             | Not determined  |
| 1961           | Apr. 3, 1961  | •33              | Not determined  |
| 1962           | Mar. 25, 1962 | •90              | Not determined  |
| 1963           | Mar. 6, 1963  | •95              | Not determined  |
| 1964           | Apr. 1, 1964  |                  | Not determined  |
| 1965           |               |                  | (c)             |
| 1966           | March 1966    | .31              | Not determined  |
| 1967           | March 1967    | 1.16             | Not determined  |
| , ,            |               |                  |                 |

106. East Fork Wolf Creek near Lustre, Mont. (6-1757)

Location. -- Lat 48°24', long 105°48', in SE sec. 30, T.31 N., R.46 E., at culverts on county road, 4 miles east of Lustre.

<u>Drainage area.--9.61</u> sq mi.
<u>Records available.--</u>June 1955 to

Gage. -- Crest-stage gage installed June 9, 1955. Altitude of gage is 2,720 ft (from topographic map).

| Annual maximum | <u>aata</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1956           | April 1956    | 3.24             | Not determined  |
| 1957           | March 1957    | 3.28             | Not determined  |
| 1958           | March 1958    | .58              | Not determined  |
| 1959           | June 21, 1959 | •45              | Not determined  |
| 1960           | Mar. 19, 1960 |                  | a 150           |
| 1961           | Mar. 5, 1961  |                  | a 130           |
| 1962           | June 14, 1962 | NIMA CUIP        | 74              |
| 1963           | Mar. 6, 1963  |                  | a 40            |
| 1964           | Apr. 1, 1964  |                  | a 50            |
| 1965           | June 16, 1965 | 2.92             | Not determined  |
| 1966           | March 1966    | 4.79             | Not determined  |
| 1967           | March 1967    |                  | a 100           |
| 1967           | March 1967    |                  |                 |

a About.

c No evidence of flow during year.

Location. -- Lat 48°14', long 105°46', in sec.29, T.29 N., R.46 E., at bridge on county road, 15 miles northwest of Wolf Point.

Drainage area. -- 2.46 sq mi.

Records available. -- June 1955 to September 1967 (discontinued).

Gage. -- Crest-stage gage installed June 24, 1955. Altitude of gage

is 2,310 ft (from topographic map).

| <u> </u> | nnual maximum | <u>data</u>   |                  |                 |
|----------|---------------|---------------|------------------|-----------------|
|          | Water year    | Date          | Gage height (ft) | Discharge (cfs) |
|          | 1955          | July 1955     | 0.50             | Not determined  |
|          | 1956          | April 1956    | 1.61             | Not determined  |
|          | 1957          | March 1957    | .89              | Not determined  |
|          | 1958          |               |                  | (c)             |
|          | 1959          | Mar. 25, 1959 | • 97             | Not determined  |
|          | 1960          |               |                  | Unknown         |
|          | 1961          | Mar. 5, 1961  | •33              | Not determined  |
|          | 1962          | June 14, 1962 | 2.46             | Not determined  |
|          | 1963          | Aug. 26, 1963 | •36              | Not determined  |
|          | 1964          | May 5, 1964   | •03              | Not determined  |
|          | 1965          | June 16, 1965 | 1.15             | Not determined  |
|          | 1966          | March 1966    | .75<br>b2.59     | Not determined  |
|          | 1967          | March 1967    | p2.59            | Not determined  |
|          |               |               |                  |                 |

108. Wolf Creek tributary No. 2 near Wolf Point, Mont. (6-1759)

Location. -- Lat 48°12', long 105°45', in sec.11, T.28 N., R.46 E., at bridge on county road, 9½ miles northwest of Wolf Point.

Drainage area. -- 6.54 sq mi.

Records available .-- June 1955 to

Gage. -- Crest-stage gage installed June 24, 1955. Altitude of gage is 2,240 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1955           | July 1955     | 1.50             | Not determined  |
| 1956           | April 1956    | 1.92             | Not determined  |
| 1957           | July 14, 1957 | 2.03             | Not determined  |
| 1958           | Mar. 24, 1958 | 1.62             | Not determined  |
| 1959           | June 20, 1959 | . 3.81           | 979             |
| 1960           | Mar. 18, 1960 | 3.24             | Not determined  |
| 1961           | May 21, 1961  | 3.00             | Not determined  |
| 1962           | July 1, 1962  | 4.78             | Not determined  |
| 1963           | July 10, 1963 | 4.18             | Not determined  |
| 1964           | May 5, 1964   | 1.56             | Not determined  |
| 1965           | June 16, 1965 | 2.66             | Not determined  |
| 1966           | July 2, 1966  | 3.23             | Not determined  |
| 1967           | March 1967    | b 5.40           | Not determined  |

c No evidence of flow during year.

## 109. Wolf Creek near Wolf Point, Mont. (6-1765)

Location. -- Lat  $48^{\circ}06^{\circ}$ , long  $105^{\circ}41^{\circ}$ , in  $N_{2}^{1}$  sec. 17, T. 27 N., R. 47 E., 2 miles northwest of Wolf Point.

Drainage area. -- 251 sq mi.

Records available. -- August 1908 to July 1914 and March 1950 to September 1953 (continuous record), 1954, May 1955 to

Gage. -- Water-stage recorder re-installed May 6, 1955. Altitude of gage is 2,010 ft (from topographic map).

Annual maximum data. --

| Annual maximum da | ala                            |                 |                 |
|-------------------|--------------------------------|-----------------|-----------------|
| Water year        |                                | age height (ft) | Discharge (cfs) |
| 1909              |                                |                 | Unknown         |
| 1910              | Mar. 13-15, 1910               | 3.9             | d 110           |
| 1911              | Mar. 19-23, 1911               |                 | d 154           |
| 1912              | Apr. 1, 1912                   | 5.9             | d 270           |
| 1913              |                                |                 | Unknown         |
| 1914              |                                |                 | Unknown         |
| 1950              | Apr. 18, 1950                  | 5.30            | 188             |
| 1951              | Apr. 5, 1951                   | 6.06            | 324             |
| 1952              | Apr. 7, 1952                   | 9.25            | 7,050           |
| 1953              | June 3, 1953                   | 7.29            | 1,010           |
| 1954<br>1956      | Apr. 4 or 5, 195               | 12.9            | 9,780<br>a 60   |
| 1957              | Mar. 23, 1956<br>July 14, 1957 | 5.29            | a 180           |
| 1958              | Apr. 1, 1958                   | 3.30            | a 100<br>a 6    |
| 1959              | June 21, 1959                  | 6.74            | a 330           |
| 1960              | Mar. 20, 1960                  | 9.71            | Not determined  |
| 1961              | May 22, 1961                   | 5.97            | 120             |
| 1962              | June 15, 1962                  | 7.95            | 1,440           |
| 1963              | July 11, 1963                  | 5.60            | 140             |
| 1964              | May 5, 1964                    | 5.07            | 52              |
| 1965              | May 5, 1964<br>July 8, 1965    | 6.32            | a 480           |
| 1966              | July 2, 1966                   | 6.92            | 950             |
| 1967              | Mar. 29, 1967                  | 8.13            | 1,700           |
|                   |                                |                 |                 |

a About.

d Maximum observed.

110. East Fork Duck Creek near Brockway, Mont. (6-1770.5)

Location. -- Lat 47°12', long 105°47', in sec.31, T.17 N., R.47 E., at bridge on county road, 8 miles south of Brockway.

Drainage area .== 12.4 sq mi. Records available .-- June 1955 to

Gage. -- Crest-stage gage installed June 13, 1955. Altitude of gage

is 2,660 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1955           | July 12, 1955 | 1.46             | 106             |
| 1956           | Mar. 2. 1956  | 1.08             | 60              |
| 1957           | July 14, 1957 | 3.64             | 505             |
| 1958           | July 21, 1958 | .19              | 8               |
| 1959           | Mar. 18, 1959 | 2.47             | 273             |
| 1960           | Aug. 16, 1960 | 1.65             | 140             |
| 1961           | May 31, 1961  | 1.62             | 131+            |
| 1962           | July 14, 1962 | 1.97             | 190             |
| 1963           | June 6, 1963  | 4.30             | 650             |
| 1964           | July 5, 1964  | 1.31             | 93              |
| 1965           | June 16, 1965 | 2.33             | 250             |
| 1966           | July 1, 1966  | 2.19             | 224             |
| 1967           | March 1967    | ъ.85́            | a 30            |
| 7 - 1          | • •           |                  |                 |

## 111. Duck Creek near Brockway, Mont. (6-1771)

Location .-- Lat 47°15', long 105°49', in SE1 sec. 11, T.17 N., R.46 E., at bridge on county road, 5 miles southwest of Brockway.

Drainage area. -- 54.0 sq mi.

Records available .-- 1921-22, miscellaneous measurements only. May 1957 to

Gage .-- Crest-stage gage installed May 21, 1957. Altitude of gage is 2,580 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1957           | July 14, 1957 | 4.00             | 640             |
| 1958           | July 3, 1958  | 1.05             | <del>7+</del> 0 |
| 1959           | Mar. 18, 1959 | 5.15             | 1,000           |
| 1960           | Mar. 20, 1960 | 3.57             | 520             |
| 1961           | June 1, 1961  | 06               | a l             |
| 1962           | June 6, 1962  | 2.59             | 270             |
| 1963           | June 6, 1963  | 4.79             | 890             |
| 1964           | July 5, 1964  | 1.76             | a 50            |
| 1965           | June 16, 1965 | 2.88             | 340 (revised)   |
| 1966           | July 1, 1966  | 1.85             | 130             |
| 1967           | March 1967    | b 1.57           | a 50            |
|                |               |                  |                 |

#### 112. Redwater Creek at Brockway, Mont. (6-1771.5)

Location. -- Lat 47°19', long 105°45', in NW sec. 20, T.18 N., R.47E., at bridge on county road, a quarter of a mile northwest of Brockway.

Drainage area. -- 216 sq mi.

Records available .-- January 1958 to

Gage. -- Crest-stage gage installed Jan. 16, 1958. Altitude of gage is 2,550 ft (from topographic map).

| Annual maximum | data            |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs) |
| 1957           | e July 14, 1957 | 5.8              | 1,220           |
| 1958           | July 3, 1958    | 1.86             | 130             |
| 1959           | Mar. 18, 1959   | 5.53             | 1,130           |
| 1960           | Mar. 20, 1960   | b 6.94           | a 1,000         |
| 1961           | June 1, 1961    | 2.26             | 200             |
| 1962           | June 6, 1962    | 5.80             | 1,220           |
| 1963           | June 6, 1963    | 5.45             | 1,520           |
| 1964           | July 5, 1964    | 3.95             | 790             |
| 1965           | Apr. 3, 1965    | 4.56             | a 800           |
| 1966           | March 1966      | 3.26             | 420             |
| 1967           | March 1967      | 2.50             | 250             |

## 113. Tusler Creek near Brockway, Mont. (6-1772)

Location. -- Lat 47°18', long 105°39', in SE<sup>1</sup>/<sub>4</sub> sec. 24, T.18 N., R.47E., at bridge on county road, 4 miles east of Brockway.

Drainage area. -- 90.2 sq mi.

Records available. -- October 1956 to

Gage.--Crest-stage gage installed Oct. 12, 1956. Altitude of gage is 2,550 ft (from topographic map).

| Annual maximum | <u>aata</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1957           | Feb. 27, 1957 | 1.66             | 200             |
| 1958           | July 21, 1958 | 22               | 14              |
| 1959           | Mar. 18, 1959 | b 2.16           | a 150           |
| 1960           | Mar. 20, 1960 | 1.96             | 280             |
| 1961           | Mar. 6, 1961  | - · O1+          | <sub>.</sub> 18 |
| 1962           | July 19, 1962 | 3.36             | 430             |
| 1963           | June 6, 1963  | 2.34             | 280             |
| 1964           | July 5, 1964  | 1.88             | 215             |
| 1965           | June 16, 1965 | 1.15             | 120             |
| 1966           | March 1966    | 1.43             | 155             |
| 1967           | March 1967    | •73              | 75              |
|                |               |                  |                 |

a About.

b Backwater from ice.

e Prior to installation of gage.

114. Tusler Creek tributary near Brockway, Mont. (6-1772.5)

Location .-- Lat 47°18', long 105°41', in NE1 sec. 26, T.18 N., R.47 E., at bridge on county road, 4 miles east of Brockway.

Drainage area. -- 3.17 sq mi.

Records available .-- September 1956 to

Gage. -- Crest-stage gage installed Sept. 15, 1956. Altitude of gage

is 2,590 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1957           | July 14, 1957 | 0.81             | Not determined  |
| 1958           |               |                  | (c)             |
| 1959           | Mar. 18, 1959 | •46              | Not determined  |
| 1960           | Aug. 16, 1960 | 1.10             | Not determined  |
| 1961           |               |                  | (c)             |
| 1962           |               |                  | (c)             |
| 1963           | Feb. 26, 1963 | 1.49             | Not determined  |
| 1964           | July 5, 1964  | 7.80             | 1,610           |
| 1965           | April 1965    |                  | ´<1             |
| 1966           |               |                  | (c)             |
| 1967           |               |                  | (c)             |

115. Redwater Creek tributary near Brockway, Mont. (6-1773)

Location. -- Lat 47°21', long 105°41', in NE4SE4 sec.2, T.18 N., R.47 E., at culvert on State Highway 20, 4 miles northeast of Brockway. Drainage area. -- 0.29 sq mi.

Records available. -- 1954, July 1957 to Gage. -- Crest-stage gage installed Jan. 15, 1958. Altitude of gage is 2,500 ft (from topographic map).

| Annual maximum | data            |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | <u>Date</u>     | Gage height (ft) | Discharge (cfs) |
| 1954           | e Aug. 18, 1954 | 7.40             | 72              |
| 1957           | e July 14, 1957 | 9.40             | 83              |
| 1958           |                 |                  | (c)             |
| 1959           | Mar. 18, 1959   | . b 4.35         | a 20            |
| 1960           | Mar. 20, 1960   | 1.17             | 12              |
| 1961           | July 29, 1961   | 1.65             | 16              |
| 1962           | June 6, 1962    | .62              | 8               |
| 1963           | June 3, 1963    | .60              | 8               |
| 1964           | July 5, 1964    | 11.12            | 234             |
| 1965           | June 16, 1965   | .89              | 7+              |
| 1966           | March 1966      | •69              | 3               |
| 1967           | March 1967      | •35              | Ž               |

a About.

b Backwater from ice.

c No evidence of flow during year.

e Prior to installation of gage; peak discharge computed from highwater marks along highway embankment at culvert.

116. South Fork Dry Ash Creek near Circle, Mont. (6-1773.5)

Location .- Lat 47°18', long 105°35', in NW4 sec. 27, T.18 N., R.48 E., at bridge on county road, 94 miles south of Circle.

Drainage area. -- 5.74 sq mi.

Records available .-- June 1955 to

Gage. -- Crest-stage gage installed June 13, 1955. Altitude of gage

is 2,670 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1955           | July 12, 1955 | 2.18             | 56              |
| 1956           | Mar. 1, 1956  | 1.37             | 17              |
| 1957           | Feb. 26, 1957 | 1.58             | 52              |
| 1958           | June 3, 1958  | •23              | 3               |
| 1959           | Mar. 22, 1959 | 2.12             | 79              |
| 1960           | Aug. 16, 1960 | 2.40             | 85              |
| 1961           | _ <u></u>     |                  | (c)             |
| 1962           | July 14, 1962 | 1.12             | 22              |
| 1963           | June 6, 1963  | <b>.</b> 76      | 10              |
| 1964           | July 5, 1964  | 1.93             | 58              |
| 1965           | June 16, 1965 | 2.08             | 66              |
| 1966           | June 4, 1966  | 1.52             | 37              |
| 1967           | March 1967    | 1.50             | 36              |
|                |               |                  |                 |

117. McCune Creek near Circle, Mont. (6-1774)

Location. -- Lat 47°21', long 105°35', in NW sec. 3, T.18 N., R.48 E., near bridge on county road, 5 miles south of Circle.

Drainage area. -- 29.9 sq mi.
Records available. -- June 1955 to

Gage. -- Crest-stage gage installed June 13, 1955. Altitude of gage is 2,500 ft (from topographic map).

| Annual maximum | <u>data</u>     |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs) |
| 1955           | July 12, 1955   | 4.32             | 128             |
| 1956           | Mar. 20. 1956   | 3.31             | 52              |
| 1957           | July 14, 1957   | 4.93             | 175             |
| 1958           | June 3, 1958    | •98              | 6               |
| . 1959         | Mar. 22, 1959 · |                  | Unknown         |
| 1960           | Mar. 20, 1960   | 5.44             | a 150           |
| 1961           | Mar. 6, 1961    | 1.36             | a 5             |
| 1962           | July 19, 1962   | 7.26             | 235             |
| 1963           | June 6, 1963    | 6.29             | a 450           |
| 1964           | July 5, 1964    | 6.98             | a 1,000         |
| 1965           | June 16, 1965   | 5.28             | <b>´</b> 180    |
| 1966           | March 10, 1966  | 4.70             | 110             |
| 1967           | March 1967      | 3.42             | 90              |
| 1966<br>1967   | March 10, 1966  | 4.70<br>3.42     | 110             |

a About.

c No evidence of flow during year.

## 118. Cow Creek tributary near Vida, Mont. (6-1777)

Location. -- Lat 47°43', long 105°29', in SE½ sec.36, T.23 N., R.48E., at bridge on State Highway 13, 8.8 miles south of Vida, and 20 miles northeast of Circle.

Drainage area. -- 1.71 sq mi.

Records available .-- May 1963 to

Gage. -- Crest-stage gage installed May 18, 1963. Altitude of gage is 2,390 ft (from topographic map).

| data          |                  |  |
|---------------|------------------|--|
| Date          | Gage height (ft) | Discharge (cfs)  |
| June 5, 1963  | 4.07             | 750  |
| -             |                  | (c)  |
| June 15, 1965 | •90              | 20   |
| July 2, 1966  | 2.30             | 200  |
| March 1967    | 1.25             | 50   |
|               |                  | June 5, 1963  June 15, 1965  July 2, 1966  Gage height (ft)  4.07   90  2.30 |

## 119. Wolf Creek tributary near Vida, Mont. (6-1778)

Location. -- Lat 47°55', long 105°30', in SE½ sec.15, T.25 N., R.48E., at bridge on State Highway 13, 11.1 road miles south of the Missouri River bridge near Wolf Point, and 5.5 miles north of Vida.

Drainage area. -- 0.91 sq mi.

Records available. -- July 1962 to Gage. -- Crest-stage gage installed May 18, 1963. Altitude of gage is 2,400 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1962           | July 14, 1962 | 8.58             | Not determined  |
| 1963           | Aug. 25, 1963 | 1.83             | a 70            |
| 1964           |               | GAR GAR          | (e)             |
| 1965           | Apr. 13, 1965 | 3.00             | a 150           |
| 1966           | July 4, 1966  | 5.45             | Not determined  |
| 1967           | Mar. 22, 1967 | b 1.33           | 21              |
| • •            |               |                  |                 |

a About.

b Backwater from ice

c No evidence of flow during year.

120. Missouri River tributary No. 2 near Brockton, Mont. (6-1812)

Location. -- Lat 48°09', long 104°54', in NE<sup>1</sup>/<sub>4</sub> sec.29, T.28 N., R.53 E., at culverts on U. S. Highway 2, 1.2 miles east of Brockton.

Drainage area. -- 1.60 sq mi.

Records available .-- August 1962 to

Gage. -- Crest-stage gage installed May 19, 1963. Altitude of gage is 1,960 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1962           | Aug. 10, 1962 | 8.08             | 260             |
| 1963           | July 24, 1963 | 8.34             | 313             |
| 1964           | Apr. 1, 1964  | 1.53             | 53              |
| 1965           | June 15, 1965 | 1.88             | 62              |
| 1966           | July 4, 1966  | 1.23             | 48              |
| 1967           | March 1967    | b 2.91           | a 40            |
|                | • •           | •                |                 |

a About.

b Backwater from ice.

121. Big Muddy Creek at Plentywood, Mont. (6-1830)

Location. -- Lat  $48^{\circ}46'$ , long  $104^{\circ}35'$ , in  $NW_{4}^{1}NW_{4}^{1}$  sec. 30, T.35 N., R.55 E., at Plentywood.

Drainage area. -- 850 sq mi.

Records available. -- April 1948 to September 1953 (continuous record), June 1955 to September 1967 (discontinued).

Gage. -- Crest-stage gage installed June 10, 1955. Recording gage April 1948 to September 1953. Altitude of gage is 1,980 ft (by barometer).

| Annual maximum    | data                        |                  |                            |
|-------------------|-----------------------------|------------------|----------------------------|
| <u>Water year</u> | Date                        | Gage height (ft) | Discharge (cfs)            |
| 1948              | Apr. 19, 1948               | 15.64            | 2,850                      |
| 1949              | Mar. 30, 1949               | 10.49            | 1,020                      |
| 1950              | Apr. 18, 1950               | 12.27            | 1,620                      |
| 1951              | May 3, 1951<br>Apr. 8, 1952 | 11.38            | 1,360                      |
| 1952              | Apr. 8, 1952                | 19.00            | 7,240                      |
| 1953              | June 30, 1953               | 19.40            | 8,000                      |
| 1954<br>1955      |                             | (f)              | Unknown<br><b>&lt;</b> 210 |
| 1956              | Mar. 22, 1956               | b 6.63           | a 300                      |
| 1957              | July 16, 1957               | 6.58             | 413                        |
| 1958              | Mar. 29, 1958               | 12.92            | 1,630                      |
| 1959              | June 30, 1959               | 10.61            | 945                        |
| 1960              | Mar. 22, 1960               | ъ 17.37          | a 3,500                    |
| 1961              | May 30, 1961                | 6.03             | 260                        |
| 1962              | Mar. 27, 1962               | 11.99            | 1,250                      |
| 1963              | Mar. 22, 1963               | ъ 12.00          | a 750                      |
| 1964              | May 3, 1964                 | 7.14             | 390                        |
| 1965              | Apr. 16, 1965               | 7.98             | 500                        |
| 1966<br>1967      | Mar. 14, 1966<br>March 1967 | 9.58<br>12.04    | 750                        |
| 1967              | March 1907                  | 12.04            | 1.300                      |

a About.

b Backwater from ice.

f Peak discharge did not reach bottom of gage.

#### 122. Box Elder Creek near Plentywood, Mont. (6-1831)

Location. -- Lat 48°50', long 104°30', in sec. 34, T.36 N., R.55 E., at culverts on county road, 4 miles northeast of Plentywood.

Drainage area. -- 9.40 sq mi. Records available .-- June 1955 to

Gage. -- Crest-stage gage installed June 10, 1955. Altitude of gage is 2,200 ft (from topographic map).

| Annual maximum | <u>data</u>    |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1956           | March 1956     | 0.25             | 0               |
| 1957           | July 23, 1957  | 7.24             | 328             |
| 1958           | Mar. 30, 1958  | i.88             | 22              |
| 1959           | June 26, 1959  | 3.89             | 126             |
| 1960           | Mar. 21, 1960  | 6.24             | 265             |
| 1961           | July 30, 1961  | 1.58             | 41              |
| 1962           | Mar. 26, 1962  | 2.79             | 65              |
| 1963           | Sept. 17, 1963 | 4.06             | 103             |
| 1964           | Mar. 31, 1964  | 5.49             | 217             |
| 1965           | Apr. 14, 1965  | 2.90             | 72              |
| 1966           | Mar. 13, 1966  | 2,98             | 75              |
| 1967           | Mar. 22, 1967  | ъ 5.82           | 176             |
| -/01           | ,,,            | - /              | •               |

123. Box Elder Creek at damsite, near Plentywood, Mont. (6-1832)

Location. -- Lat 48°48', long 104°33', in NE 1/2 sec. 17, T.35 N., R.55 E., at old damsite, 12 miles north of Plentywood.

<u>Drainage area.--19.9</u> sq mi.

<u>Records available.--1953</u>, March 1955 to September 1963 (discontinued).

<u>Gage.--Crest-stage</u> gage installed June 10, 1955. Altitude of gage is 2,120 ft (from topographic map).

| Annual maximum | <u>data</u>     |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs) |
| 1953           | e June 30, 1953 | 6.52             | 6,530           |
| 1955           | e Mar. 29, 1955 | 2.42             | 890             |
| 1956           | <u></u>         |                  | (c)             |
| 1957           | July 23, 1957   | 3.56             | 1,600           |
| 1958           | Mar. 30, 1958   | •75              | 210             |
| . 1959         | June 26, 1959   | 1.38             | 430             |
| 1960           | Mar. 22, 1960   | 2.27             | 820             |
| 1961           | Mar. 20, 1961   | 1.26             | 395             |
| 1962           | Mar. 26, 1962   | 1.59             | 530             |
| 1963           | Sept. 17, 1963  | .81              | 230             |

b Backwater from ice. c No evidence of flow during year.

e Prior to installation of gage.

124. Spring Creek near Plentywood, Mont. (6-1833)

Location. -- Lat 48°49', long 104°27', in SW sec. 6, T.35 N., R.55 E., at culvert on county road, 5 miles northeast of Plentywood.

Drainage area. -- 7.05 sq mi.

Records available .-- June 1955 to

Gage. -- Crest-stage gage installed June 10, 1955. Altitude of gage is 2,260 ft (from topographic map).

Annual maximum data. --

| AIHIUGI MAAIMUM | ua va          |                  |                 |
|-----------------|----------------|------------------|-----------------|
| Water year      | Date           | Gage height (ft) | Discharge (cfs) |
| 1955            | July 7, 1955   | 0.69             | 5               |
| 1956            |                |                  | (c)             |
| 1957            | July 23, 1957  | 2.77             | 76              |
| 1958            | Mar. 30, 1958  | 1.49             | 25              |
| 1959            | June 26, 1959  | 1.30             | 20              |
| 1960            | Mar. 21, 1960  | 5.19             | 240             |
| 1961            | July 30, 1961  | . 1.20           | 17              |
| 1962            | Mar. 26, 1962  | 1.32             | 24              |
| 1963            | Sept. 17, 1963 | a 2.7            | 72              |
| 1964            | Mar. 31, 1964  | b 5.45           | a 40            |
| 1965            | Apr. 14, 1965  | b .67            | a 10            |
| 1966            | Mar. 13, 1966  | 2.33             | 60              |
| 1967            | April 1967     | 1.07             | 16              |
|                 |                |                  |                 |

125. Spring Creek at Highway 16, near Plentywood, Mont. (6-1834)

Location. -- Lat 48°46', long 104°31', in SE½ sec.21, T.35 N., R.55 E., at bridge on State Highway 16, 1½ miles east of Plentywood.

<u>Drainage area.--16.9 sq mi.</u> Records available.--June 1955 to

Gage. -- Crest-stage gage installed June 23, 1955. Altitude of gage is 2,040 ft (from topographic map).

Annual maximum data .--

| AILIUAL MAAIMUM | <u>uava</u>                    |                  |                 |
|-----------------|--------------------------------|------------------|-----------------|
| Water year      | <u>Date</u>                    | Gage height (ft) | Discharge (cfs) |
| 1955            |                                |                  | (c)             |
| 1956            | Apr. 3, 1956                   | 0.74             | <u> 1</u> +     |
| 1957            | July 23, 1957                  | 3.38             | 540             |
| 1958            | July 23, 1957<br>Mar. 30, 1958 | 2.40             | 230             |
| 1959            | June 26, 1959                  | 3.70             | 660             |
| 1960            | May 24, 1960                   | 3.56             | 600             |
| 1961            | Mar. 20, 1961                  | 1.02             | 10              |
| 1962            | Mar. 26, 1962                  | 2.85             | 375             |
| 1963            | Sept. 17, 1963                 | 3.61             | 620             |
| 1964            | May 3, 1964                    | 1.24             | 26              |
| 1965            | Apr. 15, 1965                  | 1.18             | 20              |
| 1966            | Mar. 13, 1966                  | b 2.77           | a 60            |
| 1967            | April 1967                     | 1 64             | 80              |
| ± 907           | 1101 11 1907                   | ⊥.01             | 00              |

a About.

b Backwater from ice.

c No evidence of flow during year.

126. Big Muddy Creek tributary near Culbertson, Mont. (6-1851)

Location. -- Lat 48°12', long 10½°42', in center of east edge of sec.11, T.28 N., R.54 E., at culverts on county road, 1.9 miles north of U. S. Highway 2, 10 miles northeast of Brockton, and 9 miles northwest of Culbertson.

Drainage area. -- 7.38 sq mi.

Records available .-- May 1963 to

Gage. -- Crest-stage gage installed May 19, 1963. Altitude of gage is 1,940 ft (from topographic map).

| Annual maximum | <u> </u>      |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1963           | July 10, 1963 | 9.6              | 676             |
| 1964           | June 18, 1964 | 3.60             | 85              |
| 1965           | June 15, 1965 | 1.00             | 20              |
| 1966           | March 1966    | •75              | .10             |
| 1967           | Mar. 24, 1967 | 8.8              | 340             |

127. Missouri River tributary No. 3 near Culbertson, Mont. (6-1852)

Location. -- Lat 48°06', long 104°31', in center sec.8, T.27 N., R.56 E., at culvert on county road along the south side of the Missouri River, 2.2 miles west of State Highway 16, 3 miles south of Culbertson.

<u>Drainage area.--1.29</u> sq mi. <u>Records available.--May 1963</u> to

Gage. -- Crest-stage gage installed May 19, 1963. Altitude of gage is 1,950 ft (from topographic map).

Annual maximum data.-
Water year

1963
Aug. 25, 1963
3.88
142
1964
-1965
-1966
July 4, 1966
1967
March 1967

Aug. 25, 1963
3.88
142
(c)
-(c)
-2,570
1.44
14

c No evidence of flow during year.

128. Missouri River tributary No. 4 near Bainville, Mont. (6-1853)

Location. -- Lat 48°08', long 104°21', in NW4 sec. 34, T.28 N., R.57 E., at culvert on U. S. Highway 2, 0.8 miles east of Lannark, 8 miles east of Culbertson.

Drainage area. -- 11.6 sq mi.

Records available .-- May 1963 to

Gage.--Crest-stage gage installed May 19, 1963. Altitude of gage is 2,000 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1963           | July 24, 1963 | 2.83             | 323             |
| 1964           | June 14, 1964 | 12.02            | 1,670           |
| 1965           | Apr. 17, 1965 | 2.28             | 250             |
| 1966           | July 4, 1966  | 5.67             | 739             |
| 1967           | March 1967    | 3.95             | 500             |

129. Missouri River tributary No. 5 at Culbertson, Mont. (6-1854)

Location.--Lat 48°10', long 104°31', in SE<sup>1</sup>/<sub>4</sub> sec.20, T.28 N., R.56 E., at culvert on State Highway 16, 0.7 miles north of U. S. Highway 2, at Culbertson Rodeo Grounds.

Drainage area. -- 3.67 sq mi.

Records available .-- May 1963 to

Gage.--Crest-stage gage installed May 19, 1963. Altitude of gage is 1,970 ft (from topographic map).

Annual maximum data.--

| AIIIIual maximum | uata          |                  |                 |
|------------------|---------------|------------------|-----------------|
| Water year       | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1963             | July 24, 1963 | 6.60             | 495             |
| 1964             | June 14, 1964 | 2.59             | 128             |
| 1965             | Apr. 17, 1965 | 1.01             | a 30            |
| 1966             | July 4, 1966  | 2.14             | 95              |
| 1967             | March 1967    | · b 2.52         | a 90            |
| , ,              |               |                  |                 |

a About.

b Backwater from ice.

130. Yellowstone River tributary near Greycliff, Mont. (6-2015.5)

Location. -- Lat  $45^{\circ}44^{\circ}$ , long  $109^{\circ}43^{\circ}$ , in  $SE_{4}^{1}$  sec. 23, T.1 S., R.16 E., at culvert on Interstate Highway 90 and U. S. Highway 10, 4 miles southeast of Greycliff.

<u>Drainage area.--2.72</u> sq mi. <u>Records available.--May</u> 1959 to

Gage. -- Crest-stage gage installed May 5, 1959. Altitude of gage is 3,860 ft (from topographic map). Annual maximum data --

| AIIIIual maximum | uata          |                  |                        |
|------------------|---------------|------------------|------------------------|
| Water year       | Date          | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1960             |               |                  | (c)                    |
| 1961             |               |                  | (c)                    |
| 1962             | Feb. 8, 1962  | 0.45             | 3                      |
| 1963             | June 14, 1963 | • 55             | 1                      |
| 1964             | <u></u>       |                  | (c)                    |
| 1965             | Aug. 22, 1965 | 2.31             | 48                     |
| 1966             | Mar. 10, 1966 | .48              | 3                      |
| 1967             | June 14, 1967 | 1.52             | 32                     |

#### 131. Bridger Creek near Greycliff, Mont. (6-2016)

Location. -- Lat 45°41', long 109°43', in  $NW_{\frac{1}{4}}$  sec. 2, T.2 S., R.16 E., at bridge on county road, 6 miles southeast of Greycliff.

Drainage area .-- 61.5 sq mi.

Records available .-- May 1959 to

Gage .-- Crest-stage gage installed May 5, 1959. Altitude of gage is 4,080 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1960           | May 1960      | 0.62             | 18              |
| 1961           | March 1961    | 03               | 5               |
| 1962           | May 26, 1962  | 1.36             | 67              |
| 1963           | June 14, 1963 | 1.46             | 71              |
| 1964           | June 9, 1964  |                  | a 80            |
| 1965           | Aug. 28, 1965 | 1.08             | 58              |
| 1966           | May 5, 1966   | 1.38             | , 75            |
| 1967           | June 14, 1967 |                  | 2 <b>,</b> 680  |
|                |               |                  |                 |

a About.

c No evidence of flow during year.

#### 132. Work Creek near Reed Point, Mont. (6-2016.5)

Location. -- Lat 45°42', long 109°38', in SE<sup>1</sup>/<sub>4</sub> sec.33, T.1 S., R.17 E., at bridge on county road, 4 miles west of Reed Point.

Drainage area. -- 32.5 sq mi.
Records available. -- May 1959 to

Gage. -- Crest-stage gage installed May 4, 1959. Altitude of gage is

3,820 ft (from topographic map).

| Annual maximum | data           |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | <u>Date</u>    | Gage height (ft) | Discharge (cfs) |
| 1959           | Sept. 21, 1959 | 2.3              | a 100           |
| 1960           | May 1960       |                  | a 5             |
| 1961           |                |                  | (c)             |
| 1962           | June 13, 1962  | 4.08             | 406             |
| 1963           | June 14, 1963  | 1.97             | 19              |
| 1964           |                |                  | (c)             |
| 1965           | Apr. 2, 1965   | 2.05             | 25              |
| 1966           | Mar. 10, 1966  | 2.48             | 73              |
| 1967           | June 14, 1967  | 4.65             | 720             |
|                | ,              |                  |                 |

#### 133. Hump Creek near Reed Point, Mont. (6-2017)

Location. -- Lat 45°42', long 109°35', in NE sec. 35, T.1 S., R.17 E., at bridge on Interstate Highway 90 and U. S. Highway 10, 2 miles west of Reed Point.

Drainage area. -- 7.61 sq mi.

Records available. -- May 1959 to

Gage.--Crest-stage gage installed May 4, 1959. Altitude of gage is 3,780 ft (from topographic map).

| Water year Date Gage height (ft) Discharge (c: | `s) |
|--|-----|
|  |     |
| 1960 Mar. 19, 1960 0.50 15                     |     |
| 1961 (c)                                       |     |
| 1962 June 13, 1962 2.96 307                    |     |
| 1963 May 12, 1963 .29 8                        |     |
| . 1964 (f) <1                                  |     |
| 1965 Apr. 2, 1965 .2 5                         |     |
| 1966 Mar. 10, 1966 .76 30                      |     |
| 1967 June 27, 1967 1.93 130                    |     |

a About.

c No evidence of flow during year.

f Peak discharge did not reach bottom of gage.

## 134. Berry Creek near Columbus, Mont. (6-2017.5)

Location. -- Lat 45°42', long 109°23', in NW sec. 33, T.1 S., R.19 E., at bridge on county road, 8 miles northwest of Columbus.

Drainage area .-- 23.5 sq mi.

Records available. -- May 1959 to Gage. -- Crest - stage gage installed May 4, 1959. Altitude of gage is 3,700 ft (from topographic map).

| data           |   |  |
|----------------|---|--|
| <u>Date</u>    | Gage height (ft)  | Discharge (cfs)  |
| e July 7, 1958 | 4.54  | 620  |
| e Mar. 1, 1959 | 3.86  | 283  |
| June 15, 1960  | .02   | 0  |
| May 15, 1961   | .10   | 0  |
| July 31, 1962  | 6.62  | Not determined   |
| June 14, 1963  | 2.60  | 55   |
| Apr. 24, 1964  | • 53  | ÷5.  |
| Aug. 22, 1965  | • 52  | • 5  |
| Mar. 10, 1966  | •31   | 0  |
| May 1967       | .66   | .8   |
|                | Date e July 7, 1958 e Mar. 1, 1959 June 15, 1960 May 15, 1961 July 31, 1962 June 14, 1963 Apr. 24, 1964 Aug. 22, 1965 | Date Gage height (ft) e July 7, 1958 e Mar. 1, 1959 June 15, 1960 May 15, 1961 July 31, 1962 June 14, 1963 Apr. 24, 1964 Aug. 22, 1965 Gage height (ft) 4.54 6.62 2.60 6.62 2.60 6.62 2.60 6.62 2.60 6.53 6.52 |

## 135. Allen Creek near Park City, Mont. (6-2051)

Location .- Lat 45°36', long 109°03', in NE 4 sec. 7, T.3 S., R.22 E., about 200 ft upstream from Cove Ditch flume, 7 miles west of Park City.

Drainage area. -- 7.17 sq mi.

Records available .-- June 1961 to

Gage. -- Crest-stage gage installed June 15, 1961. Altitude of gage is 3,470 ft (from topographic map). Annual maximum data ---

| <u></u> | man man mum | <u>uava</u> .  |                  |                 |
|---------|-------------|----------------|------------------|-----------------|
|         | Water year  | Date           | Gage height (ft) | Discharge (cfs) |
|         | 1961        | e May 24, 1961 | 5.68             | 1,580           |
|         | 1962        | Feb. 1, 1962   | 1.30             | 40              |
|         | 1963        | June 3, 1963   | • 15             | 10              |
|         | 1964        | -              |                  | (c)             |
|         | 1965        | Apr. 2, 1965   | •35              | 15              |
|         | 1966        | June 19, 1966  | 2.40             | 140             |
|         | 1967        | June 17, 1967  | 2.00             | 196             |
|         |             |                |                  |                 |

c No evidence of flow during year.

e Prior to installation of gage.

Location. -- Lat 45°38', long 108°24', in SW sec. 28, T.2 S., R.27 E., at bridge on county road, 19 miles southeast of Billings.

<u>Drainage area.--8.14 sq mi.</u> <u>Records available.--May 1955 to</u>

Gage. -- Crest-stage gage installed May 26, 1955. Altitude of gage is 3,550 ft (from topographic map).

|  | 2 1  |
|--|------|
| Water year Date Gage height (ft) Discharge ( | efs) |
| 1955 Aug. 25, 1955 a 5                       |      |
| 1956 Feb. 22, 1956 3.23 65                   |      |
| 1957 June 8, 1957 1.66 62                    |      |
| 1958 July 2, 1958 .50 14                     |      |
| 1959 June 4, 1959 1.14 39                    |      |
| 1960 May 2, 1960 2.50 110                    |      |
| 1961 May 21, 1961 .40 10                     |      |
| 1962 Mar. 9, 1962 1.92 76                    |      |
| 1963 June 8, 1963 2.7 125                    |      |
| 1964 Apr. 26, 1964 6.9 565                   |      |
| 1965 June 25, 1965 2.20 95                   |      |
| 1966 Mar. 9, 1966 4.18 250                   |      |
| 1967 June 6, 1967 2.46 149                   |      |

## 137. West Buckeye Creek near Billings, Mont. (6-2163)

Location. -- Lat 45°39', long 108°24', in NE sec. 21, T.2 S., R.27 E., 2,000 ft upstream from bridge on county road, 17 miles southeast of Billings.

Drainage area. -- 1.54 sq mi.

Records available .-- May 1955 to

Gage.--Crest-stage gage installed May 26, 1955. Altitude of gage is 3,500 ft (from topographic map).
Annual maximum data.--

| AIHIUAI MAXIMUM | ua va •       |                  |                  |
|-----------------|---------------|------------------|------------------|
| Water year      | Date          | Gage height (ft) | Discharge (cfs)  |
| 1955            | Aug. 25, 1955 | 1.54             | 17               |
| 1956            | May 29, 1956  | 2.24             | 92               |
| 1957            | May 12, 1957  | 1.81             | 185              |
| 1958            | July 2, 1958  | 1.31             | 83               |
| 1959            | June 4, 1959  | .68              | 15               |
| 1960            | May 2, 1960   | 1.16             | 60               |
| 1961            | May 24, 1961  | .80              | 22               |
| 1962            | Mar. 9, 1962  | 1.03             | <del>11,11</del> |
| 1963            | June 20, 1963 | 1.37             | a 30             |
| 1964            | Apr. 26, 1964 | 4.1+8            | 215              |
| 1965            | Apr. 2, 1965  | 3.38             | 135              |
| 1966            | Mar. 10, 1966 | 3.8              | 225              |
| 1967            | June 6, 1967  | 2.69             | 149              |
|                 | •             |                  |                  |

Location. -- Lat 45°43', long 108°19', in sec.30, T.1 S., R.28 E., at bridge on Interstate Highway 90 and U. S. Highway 87, ll miles southeast of Billings.

Drainage area. -- 435 sq mi.

Records available. -- September 1911 to September 1924 and March 1938 to December 1953 (continuous record), May 1955 to Gage. -- Crest-stage gage installed May 26, 1955. Wire-weight gage September 1911 to September 1924 and March 1938 to December 1953.

Altitude of gage is 3,310 ft (by barometer).

| Annual maximum   | <u>data</u>  |   |  |
|--|--|---|--|
| Water year   | Date July 3, 1912  a Mar. 20, 1913 June 26, 1914 June 12, 1915 May 22, 1916 June 5, 1917 Mar. 27, 1918 Aug. 2, 1919 May 12, 1920 June 9, 1921 May 11, 1922 Sept. 30, 1923 Apr. 4, 1924 June 24, 1938 | Gage height (ft)                                | Discharge (cfs)  |
| 1912<br>1913<br>1914<br>1915<br>1916<br>1917<br>1918<br>1919<br>1920<br>1921<br>1922 | July 3, 1912   | 11.2<br>12.54<br>9.3<br>9.7<br>7.01             | d 930<br>1,130<br>d 595  |
| 1913   | a Mar. 20, 1913  | 12.54   | 1,130  |
| 1914   | Tuno 12 1015   | 9.3   | d 575  |
| 1916   | a Mar. 20, 1913<br>June 26, 1914<br>June 12, 1915<br>May 22, 1916  | 7.01  | q 333  |
| 1917   | June 5, 1917   | 10.44   | d 750  |
| 1918   | Mar. 27, 1918  | 10.44<br>8.35<br>7.30                           | d 480  |
| 1919   | Aug. 2, 1919   | 7.30  | d 3,44   |
| 1920   | May 12, 1920   | 10.37<br>9.60<br>7.65                           | d 740  |
| 1922   | Max 77 1921  | 9.60  | d 635  |
| 1923   | Mar. 27, 1919 Mar. 27, 1918 Aug. 2, 1919 May 12, 1920 June 9, 1921 May 11, 1922 Sept. 30, 1923 Apr. 4, 1924  | 8.35<br>7.30<br>10.37<br>9.665<br>7.25<br>10.04 | 9.5553004059943500405005   |
| 1924   | Apr. 4, 1924   | 9.25<br>10.04                                   | ā 765  |
| 1938   | June 24, 1938  | 7.9   | 1,230  |
| 1924<br>1938<br>1939<br>1940   | June 18, 1939  | 7.9<br>3.35<br>2.83                             | d 332<br>d 208   |
| 1940   | Apr. 4, 1924 June 24, 1938 June 18, 1939 Apr. 16, 1940 Sept. 8, 1941   | 7.9<br>3.35<br>2.83<br>4.68                     | d 208<br>d 607   |
| 1941<br>1942   | Sept. 8, 1941<br>May 14, 1942  | 9.2   | 1,500  |
| 1943   | Mar. 26, 1943  |   | d 590<br>d 705<br>1,230<br>d 332<br>d 208<br>d 607<br>1,500<br>h 1,000 |
| 1943<br>1944   | Table 70 7011  | 7.66<br>4.80                                    | d 1,150  |
| 1945<br>1946   | June 11, 1945  | 4.80  | 625  |
| 1946   | June 12, 1946  | 3.98  | d 489  |
| 1947   | Mar. 19, 1947  | 3 05  | h 890<br>d 464   |
| 1948<br>1949   | Apr. 20, 1948 June 3, 1949 Feb. 25, 1950 Mar. 22, 1951 May 22, 1952 June 7, 1953   | 3.95<br>2.22                                    | d 489<br>h 890<br>d 464<br>d 1330<br>d 761<br>d 424<br>d 145           |
| 1950   | Feb. 25, 1950  |   | h 230  |
| 1951   | Mar. 22, 1951  | b 9.82<br>4.25                                  | d 761  |
| 1952   | May 22, 1952   | 4.25<br>2.43                                    | d 424  |
| 1950<br>1951<br>1952<br>1953<br>1954   | June 19, 1944 June 11, 1945 June 12, 1946 Mar. 19, 1947 Apr. 20, 1948 June 3, 1949 Feb. 25, 1950 Mar. 22, 1951 May 22, 1952 June 7, 1953   | 2.43  | d 145<br>Unknown   |
| 1955   | June 16, 1955  | 3 = 7+7+  | 286  |
| 1955<br>1956<br>1957<br>1958<br>1960<br>1961   | Feb. 22, 1956  | 3.44<br>b 9.12<br>6.14                          | 286<br>a 800   |
| 1957   | June 8, 1957   | 6.14  | 825  |
| 1958   | Feb. 20, 1958  | 3.26<br>4.65                                    | 262  |
| 1999   | Mar. 2, 1959<br>May 2, 1960  | 4.07  | 700  |
| 1961   | May 2, 1960<br>Sept. 20, 1961  | 3.44  | 1,700  |
| 1962   | Mar. 2, 1959<br>May 2, 1960<br>Sept. 20, 1961<br>Mar. 9, 1962  | 6.20  | 262<br>262<br>508<br>1,700<br>288<br>840                               |
| 1962<br>1963<br>1964   | Apr. 28, 1963  | 4.07<br>9.9<br>3.44<br>6.20<br>8.40<br>15.04    | 1,330  |
| 1964   | Apr. 26, 1964<br>Apr. 2, 1965  | 15.04   | 3,720  |
| 1965<br>1966<br>1967   | Sept. 20, 1961<br>Mar. 9, 1962<br>Apr. 28, 1963<br>Apr. 26, 1964<br>Apr. 2, 1965<br>Mar. 11, 1966<br>June 14, 1967   | 7.09<br>8.84<br>4.72                            | 1,330<br>3,720<br>1,040<br>1,440                                       |
| 1900   | Mar. 11, 1966<br>June 14, 1967   | 8.84<br>4.72                                    | 1,440  |
| 170/   | June 14, 1967  | 7./←  | 920  |

a About.

b Backwater from ice or beaver dam. h Maximum daily.

d Maximum observed.

139. Crooked Creek tributary near Shepherd, Mont. (6-2177)

Location. -- Lat 46°04', long 108°30', in SW sec.21, T.4 N., R.26 E., at bridge on county road, 1.7 miles west of U. S. Highway 87 between Billings and Roundup, 12 miles northwest of Shepherd, and 20 miles north of Billings.

<u>Drainage area.--7.21 sq mi.</u>
<u>Records available.--June 1962 to</u>

Gage. -- Crest-stage gage installed Apr. 22, 1963. Altitude of gage is 3,400 ft (from topographic map).

| Annual maximum data                           |     |
|---|-----|
| Water year Date Gage height (ft) Discharge (c | fs) |
| 1962 e June 4, 1962 13.68 5,120               |     |
| 1963 June 21, 1963 5.26 1,110                 |     |
| 1964 June 18, 1964 1.76 a 150                 |     |
| 1965 June 25, 1965 47                         |     |
| 1966 Mar. 8, 1966 3.54 a 600                  |     |
| 1967 June 11, 1967 7.85 1,980                 |     |

140. Yellowstone River tributary No. 2 near Pompeys Pillar, Mont. (6-2178)

Location. -- Lat 46°02', long 107°48', in NW sec.6, T.3 N., R.32 E., at culvert on Interstate Highway 94 and U. S. Highways 10 and 312, 0.7 mile west of Spring Creek, 8 miles east of Pompeys Pillar, and 13 miles west of Custer.

Drainage area. -- 0.70 sq mi.

Records available .-- May 1962 to

Gage. -- Crest-stage gage installed Apr. 28, 1963. Altitude of gage is 2,850 ft (from topographic map).

| Annual maximum | data           |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | <u>Date</u>    | Gage height (ft) | Discharge (cfs) |
| 1962           | e May 13, 1962 | a 1.5            | Not determined  |
| 1963           | <u></u>        |                  | (c)             |
| 1964           |                |                  | (c)             |
| 1965           |                |                  | (c)             |
| 1966           | Mar. 14, 1966  | .20              | Not determined  |
| 1967           | '              |                  | (c)             |

a About.

c No evidence of flow during year.

e Prior to installation of gage.

## 141. Andresen Coulee near Custer, Mont. (6-2944)

Location. -- Lat 46°04', long 107°33', in center War sec. 30, T.4 N., R.34 E., at culvert on State Highway 47, 4a miles south of Custer, and 5.3 road miles south of U. S. Highways 10 and 312.

Drainage area. -- 2.35 sq mi.

Records available .-- April 1963 to

Gage.--Crest-stage gage installed Apr. 27, 1963. Altitude of gage is 2,820 ft (from topographic map).

| Annual maximum | data          |                  |                        |
|----------------|---------------|------------------|------------------------|
| Water year     | Date          | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1963           | June 4, 1963  | 1.57             | Not determined         |
| 1964           | June 18, 1964 | 1.06             | Not determined         |
| 1965           | Aug. 23, 1965 | .87              | Not determined         |
| 1966           | Mar. 9, 1966  |                  | a 5                    |
| 1967           | February 1967 | 0.30             | Not determined         |

## 142. Unknown Creek near Bighorn, Mont. (6-2948)

Location. -- Lat 46°12', long 107°25', in SE½ sec.12, T.5 N., R.34 E., at bridge on Interstate Highway 94 and U. S. Highways 10 and 312, 4 miles east of Bighorn.

Drainage area .-- 14.6 sq mi.

Records available .-- May 1962 to

Gage. -- Crest-stage gage installed Apr. 27, 1963. Altitude of gage is 2,690 ft (from topographic map).

| Annual maximu                | n data   |                                |                             |
|------------------------------|--|--------------------------------|-----------------------------|
| Water year                   | Date   | Gage height (ft)               | Discharge (cfs)             |
| 1962                         | e May 13, 1962   | 3.98                           | a 800                       |
| 1963                         | June 4, 1963   | 3.60                           | 657                         |
| 1964                         | June 18, 1964  | 2.73                           | a 370                       |
| 1965                         | July 19, 1965  | 3.48                           | 610                         |
| 1966                         | Mar. 9, 1966   | b 2.33                         | a 50                        |
| 1967                         | March 1967   | b 2.29                         | a 100                       |
| 1963<br>1964<br>1965<br>1966 | June 4, 1963<br>June 18, 1964<br>July 19, 1965<br>Mar. 9, 1966 | 3.60<br>2.73<br>3.48<br>b 2.33 | 657<br>a 370<br>610<br>a 50 |

a About.

b Backwater from ice.

e Prior to installation of gage.

## 143. Buckingham Coulee near Myers, Mont. (6-2948.5)

Location. -- Lat 46°14', long 107°17', in SW1 sec.25, T.6 N., R.35 E., at bridge on Interstate Highway 94 and U. S. Highways 10 and 312, 3 miles southeast of Myers, and 5 miles southwest of Hysham.

Drainage area. -- 2.63 sq mi.

1967

Records available .-- May 1962 to

Gage. -- Crest-stage gage installed Apr. 27, 1963. Altitude of gage is 2,820 ft (from topographic map).

| Annual maximum | <u>aata</u>    |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | <u>Date</u>    | Gage height (ft) | Discharge (cfs) |
| 1962           | e May 13, 1962 | 1.10             | 20              |
| 1963           | June 4, 1963   | • 50             | 6               |
| 1964           | June 18, 1964  | 2.20             | 122             |
| 1965           | July 9, 1965   | 3.84             | 398             |
| 1966           | Mar. 9, 1966   | b 1.84           | a 40            |
|                |                | _^               |                 |

.78

June 12, 1967

11

144. Middle Fork Froze to Death Creek tributary near Ingomar, Mont. (6-29+9)

Location. -- Lat 46°35', long 107°24', in NE 2 sec. 35, T.10 N., R.34E., at culverts on U. S. Highway 12, 1.1 miles west of Ingomar.

Drainage area.--1.36 sq mi.
Records available.--July 1962 to

Gage .-- Crest-stage gage installed May 16, 1963. Altitude of gage is 2,990 ft (from topographic map).

| Annual maximum | data            |                  |                   |
|----------------|-----------------|------------------|-------------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs)   |
| 1962           | e July 16, 1962 | 9.08             | 463               |
| 1963           | June 21, 1963   | 1.30             | ŗ <sup>‡</sup> ŗ† |
| 1964           | June 18, 1964   | 1.95             | 65                |
| 1965           | July 10, 1965   | · 5.44           | 300               |
| 1966           | July 15, 1966   | 1.55             | 52                |
| 1967           | June 18, 1967   | 1.89             | 67                |

a About.

b Backwater from ice.

e Prior to installation of gage.

145. Yellowstone River tributary No. 3 near Forsyth, Mont. (6-2950.2)

Location. -- Lat 46°18', long 106°40', in NW1 sec.12, T.6 N., R.40 E., at bridge on county road, 2.4 road miles northeast of U. S. Highway 12, and 2 miles north of Forsyth.

Drainage area. -- 4.38 sq mi.

Records available .-- June 1962 to

Gage. -- Crest-stage gage installed Apr. 27, 1963. Altitude of gage is 2,550 ft (from topographic map).

| Annual maximum | data            |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs) |
| 1962           | e June 15, 1962 | 4.84             | 406             |
| 1963           | June 19, 1963   | 1.30             | 20              |
| 1964           | Aug. 29, 1964   | 1.67             | 35              |
| 1965           | July 12, 1965   | 6.64             | 938             |
| 1966           | June 4, 1966    | 6.20             | 790             |
| 1967           | March 1967      | 2.71             | 105             |

146. Little Porcupine Creek near Forsyth, Mont. (6-2950.5)

Location. -- Lat 46°18', long 106°34', in NE<sup>1</sup>/<sub>4</sub> sec. 3, T.6 N., R.41 E., at bridge on county road, 6 miles northeast of Forsyth.

Drainage area. -- 614 sq mi.

Records available .-- May 1958 to

Gage. -- Crest-stage gage installed May 9, 1958. Altitude of gage is 2,480 ft (from topographic map).

Cooperation .-- Montana State Water Conservation Board .

| AIIIIAAL MAALMAM | ua va          |                  |                 |
|------------------|----------------|------------------|-----------------|
| Water year       | <u>Date</u>    | Gage height (ft) | Discharge (cfs) |
| 1958             | June 3, 1958   | 4.9              | 1,480           |
| 1959             | Mar. 20, 1959  | 7.08             | 2,650           |
| 1960             | Mar. 20, 1960  | 7.17             | 2,700           |
| 1961             | Sept. 20, 1961 | 8.14             | 3,320           |
| 1962             | June 15, 1962  | . 4.53           | 1,310           |
| 1963             | June 3, 1963   | 5.98             | 2,030           |
| 1964             | Apr. 27, 1964  | 2.75             | 680             |
| 1965             | Apr. 1, 1965   | 9.00             | 3.750           |
| 1966             | July 2, 1966   | 4.57             | 1,350           |
| 1967             | June 12, 1967  | 5.16             | Not determined  |
|                  | 7 -701         |                  |                 |

e Prior to installation of gage.

Location .-- Lat 45°14', long 106°57', in NE sec. 16, T.7 S., R.39 E., at culvert on private road, 7 miles south of Kirby.

Drainage area. -- 34.2 sq mi.
Records available. -- April 1959 to

Gage. -- Crest-stage gage installed Apr. 15, 1959. Altitude of gage

is 4,180 ft (from topographic map).

| Annual maximum | <u>aata</u>                    |                  |  |
|----------------|--------------------------------|------------------|--|
| Water year     | Date                           | Gage height (ft) | Discharge (cfs)                                  |
| 1960           | Mar. 19, 1960                  | 1.78             | 55   |
| 1961           | <u></u>                        |                  | (c)  |
| 1962           | June 16, 1962                  | 1.45             | <del>)                                    </del> |
| 1963           | June 16, 1962<br>Apr. 28, 1963 | 2.67             | 85   |
| 1964           | Apr. 26, 1964                  | 2.214            | 60   |
| 1965           | Apr. 1, 1965                   | b 4.78           | a 250 (revised)                                  |
| 1966           | June 22, 1966                  | 2.50             | · 78   |
| 1967           | June 12, 1967                  | 5.20             | 287  |

148. Rosebud Creek tributary near Busby, Mont. (6-2951.3)

Location. -- Lat 46°35', long 106°52', in NE sec. 13, T.3 S., R.39 E., at bridge on U. S. Highway 212, 1.1 miles east of Two Moon Creek, 6 miles northeast of Busby.

Drainage area. -- 1.14 sq mi.

Records available. -- April 1963 to

Gage. -- Crest-stage gage installed Apr. 23, 1963. Altitude of gage

is 3,310 ft (from topographic map). Annual maximum data .--

| Water year | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
|------------|---------------|------------------|-----------------|
| 1963       |               |                  | (c)             |
| 1964       | June 18, 1964 | 1.31             | 10              |
| 1965       | Aug. 21, 1965 | 1.23             | _ 8             |
|            | Mar. 11, 1966 | ' b .81          | a l             |
| 1967       | March 1967    | •99              | 6               |

a About.

b Backwater from ice.

c No evidence of flow during year.

## 149. Ridgewalker Creek near Busby, Mont. (6-2951.5)

Location. -- Lat 45°36', long 106°49', in NE1 sec. 8, T.3 S., R.40 E., at bridge on State Highway 8, 8 miles east of Busby.

Drainage area. -- 2.24 sq mi.

Records available. -- April 1959 to September 1962 (discontinued).

Gage. -- Crest-stage gage installed Apr. 15, 1959. Altitude of gage is 3,300 ft (from topographic map).

Annual maximum data --

| Allinar maximum | uata          |                  |                 |
|-----------------|---------------|------------------|-----------------|
| Water year      | Date          | Gage height (ft) | Discharge (cfs) |
| 1959            | M arch 1959   |                  | <b>&lt;</b> 5   |
| 1960            | Mar. 20, 1960 | 0.83             | Unknown         |
| 1961            | July 20, 1961 | .40              | Unknown         |
| 1962            | July 27, 1962 | 1.40             | Unknown         |

## 150. Whitedirt Creek near Lame Deer, Mont. (6-2952)

Location. -- Lat 45°36', long 106°44', in NE4 sec.2, T.3 S., R.40 E., at bridge on county road, 4½ miles west of Lame Deer.

Drainage area. -- 1.58 sq mi.

Records available .-- April 1959 to

Gage.--Crest-stage gage installed Apr. 15, 1959. Altitude of gage is 3,290 ft (from topographic map).

Annual maximum data.--

|            | a a a a a      |                  |                 |
|------------|----------------|------------------|-----------------|
| Water year | <u>Date</u>    | Gage height (ft) | Discharge (cfs) |
| 1959       | March 1959     | -                | a 5             |
| 1960       | Mar. 20, 1960  | 0.59             | 3               |
| 1961       | Sept. 10, 1961 | •32              | 2               |
| 1962       | February 1962  | •53              | 3               |
| 1963       | June 3, 1963   | 1.38             | 31              |
| 1964       | June 8, 1964   | 1.43             | 33              |
| 1965       | July 1, 1965   | .86              | 8               |
| 1966       | Sept. 12. 1966 | 1.37             | 30              |
| 1967       | June 12, 1967  | 1.3              | Ĭ9              |
| , ,        | / ' '          |                  |                 |

#### 151. Rosebud Creek near Forsyth, Mont. (6-2960)

Location. --Lat 46°11'50", long  $106^{\circ}28'25"$ , in  $SW_{\frac{1}{4}}$  sec.9, T.5 N., R.42 E., 10 miles southeast of Forsyth.

Drainage area. -- 1,260 sq mi.

Records available. -- May 1947 to December 1953 (continuous record),
July 1955 to September 1967 (discontinued).

Gage. -- Water-stage recorder re-installed July 15, 1955. Altitude of gage is 2,540 ft (by barometer).

Annual maximum data. --

| Annual maximum | <u>aata</u>                   |                  |                |
|----------------|-------------------------------|------------------|----------------|
| Water year     | Date                          | Gage height (ft) |                |
| 1948           | July 21, 1948                 | 8.41             | 382<br>418     |
| 1949           | Mar. 8, 1949                  | 8.96             |                |
| 1950           | June 9, 1950<br>Sept. 1, 1951 | 7.90             | 250            |
| 1951           | Sept. 1, 1951                 | 8.42             | 280            |
| 1952           | Mar. 29, 1952                 | 7.81             | 269            |
| 1953           | May 30, 1953                  | 10.27            | <u>d</u> 596   |
| 1954           |                               |                  | Unknown        |
| 1955           |                               |                  | <50            |
| 1956           | March 1956                    | 8.78             | a 350          |
| 1957           | June 17, 1957                 | 8.78             | 342            |
| 1958           | March 1958                    |                  | Not determined |
| 1959           | Mar. 3, 1959                  |                  | a 570          |
| 1960           | March 1960                    |                  | Unknown        |
| 1961           | Sept. 10, 1961                | 9.58             | 435            |
| 1962           | June 7, 1962                  | 9.16             | 378            |
| 1963           | June 16, 1963                 | 6.58             | 182            |
| 1964           | June 19, 1964                 | 9.49             | 420            |
| 1965           | Apr. 1, 1965                  | 10.42            | a 600          |
| 1966           | June 4, 1966                  | 7.07             | 215            |
| 1967           | June 19, 1967                 | 7.79             | 265            |
|                | -// -/-!                      |                  |                |

a About.

d Maximum observed.

# 152. Snell Creek near Hathaway, Mont. (6-2961)

Location. -- Lat 46°18', long 106°09', in NW sec.7, T.6 N., R.45 E., at bridge on old U. S. Highways 10 and 12, 22 miles northeast of Hathaway, and about 3 miles southwest of Cottonwood Creek.

Drainage area. -- 10.5 sq mi.

Records available .-- April 1963 to

Gage. -- Crest-stage gage installed Apr. 26, 1963. Altitude of gage is 2,550 ft (from topographic map).

|                |               | -                |                 |
|----------------|---------------|------------------|-----------------|
| Annual maximum | data          |                  |                 |
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1963           | June 3, 1963  | 1.69             | a 170           |
| 1964           | Aug. 29, 1964 | .30              | 1               |
| 1965           | June 14, 1965 | 2.20             | a 340           |
| 1966           | June 4, 1966  | 2.35             | a 380           |
| 1967           | June 7, 1967  | 1.3              | 85              |
| 1966           | June 4, 1966  | 2.35             | a 380<br>85     |

## 153. Spring Creek near Decker, Mont. (6-3069)

Location. -- Lat 45°05', long 106°50', in NW sec. 33, T.8 S., R.40 E., at bridge on county road, 5 miles north of Decker.

<u>Drainage area.--36.3</u> sq mi.

Records available .-- May 1958 to

Gage.--Crest-stage gage installed May 9, 1958. Altitude of gage is 3,500 ft (from topographic map).

Coopération. -- Montana State Water Conservation Board.

| HILLINGT MAXIMUM | uata           |                  |                 |
|------------------|----------------|------------------|-----------------|
| Water year       | Date           | Gage height (ft) | Discharge (cfs) |
| 1958             | June 7, 1958   | 3.4              | 184             |
| 1959             | Mar. 17, 1959  | 1.19             | 45              |
| 1960             | Mar. 19, 1960  | 1.31             | 49              |
| 1961             |                |                  | (c)             |
| 1962             | June 16, 1962  | 6.59             | a 900           |
| 1963             | June 15, 1963  | 1.07             | 7+0             |
| 1964             | Apr. 22, 1964  | .05              | 15              |
| 1965             | Aug. 21, 1965  | 2.61             | 362             |
| 1966             | Sept. 26, 1966 | .11              | a 15            |
| 1967             | June 12, 1967  | 2.81             | 390             |
|                  | •              |                  |                 |

a About.

c No evidence of flow during year.

154. Leaf Rock Creek near Kirby, Mont. (6-3069.5)

Location. -- Lat 45°11', long 106°55', in center sec.35, T.7 S., R.39 E., at culvert on county road, 10 miles south of Kirby.

Drainage area. -- 6.04 sq mi.
Records available .-- April 1959 to

Gage. -- Crest-stage gage installed Apr. 15, 1959. Altitude of gage is 3,950 ft (from topographic map).

| Annual maximum | <u>data</u>    |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1958           | e June 7, 1958 | 6.77             | 222             |
| 1959           |                | 000 DOS          | Unknown         |
| 1960           | Mar. 19, 1960  | 5.03             | 168             |
| 1961           |                |                  | (c)             |
| 1962           | June 16, 1962  | 6.37             | 216             |
| 1963           | June 15, 1963  | 6.77             | 222             |
| 1964           | Apr. 6, 1964   | 1.17             | 30              |
| 1965           | Apr. 1, 1965   | 1.62             | 45              |
| 1966           | July 12, 1966  | 3.42             | 123             |
| 1967           | June 7, 1967   | •55              | 13              |
|                | •              |                  |                 |

# 155. Spring Creek near Ashland, Mont. (6-3076.4)

Location. -- Lat 45°33', long 106°17', in NW sec. 27, T.3 S., R.44 E., at culvert on county road along east side of Tongue River, 3.3 road miles south of U. S. Highway 212, 3 miles south of Ashland.

<u>Drainage area.--1.48</u> sq mi. <u>Records available.--June 1962 to</u>

Gage. -- Crest-stage gage installed Apr. 24, 1963. Altitude of gage is 2,980 ft (from topographic map).

Annual maximum data .--Date Gage height (ft) Water year Discharge (cfs) e June 16, 1962 1962 4.12 July 5, 1963 June 18, 1964 148 1963 6.90 1964 a 30 b 1.60 1965 6.8 215 July 12, 1965 June 22, 1966 2.98 80 1966 June 12, 1967 1967

a About.

b Backwater from ice or debris.

c No evidence of flow during year.

e Prior to installation of gage.

156. Walking Horse Creek near Ashland, Mont. (6-3076.6)

Location. -- Lat 45°36', long 106°17', in NW sec.3, T.3 S., R.44 E., at culvert on county road along west side of Tongue River, 1.3 road miles north of U. S. Highway 212, and 1½ miles northwest of Ashland.

Drainage area. -- 2.79 sq mi.

Records available. -- April 1963 to

Gage. -- Crest-stage gage installed Apr. 24, 1963. Altitude of gage is 2,950 ft (from topographic map).

| Annual maximum da | <u> 1                                   </u> |                  |                 |
|-------------------|--|------------------|-----------------|
| Water year        | Date   | Gage height (ft) | Discharge (cfs) |
| 1963              |  |                  | (c)             |
| 1964              |  |                  | (c)             |
| 1965              | July 1, 1965                                 | 0.50             | Not determined  |
| 1966              |  | -                | (c)             |
| 1967              | June 12, 1967                                | .28              | Not determined  |

## 157. Stebbins Creek near Ashland, Mont. (6-3077.6)

Location. -- Lat 45°37', long 106°25', in center of sec.34, T.2 S., R.43 E., at culvert on U. S. Highway 212, 7.5 road miles west of Ashland.

Drainage area. -- 5.41 sq mi.

Records available. -- April 1963 to

Gage.--Crest-stage gage installed Apr. 23, 1963. Altitude of gage is 3,400 ft (from topographic map).

Annual maximum data.--

| THE WAY THOUSE THE | aa va •       |                  |                 |
|--------------------|---------------|------------------|-----------------|
| Water year         | Date          | Gage height (ft) | Discharge (cfs) |
| 1963               | Apr. 4, 1963  | 0.1              | < 0.5           |
| 1964               | Apr. 6, 1964  | .20              | 1               |
| 1965               | Aug. 23, 1965 | 1.59             | Not determined  |
| 1966               | Mar. 11, 1966 | b 1.85           | a 2             |
| 1967               | May 1967      |                  | < 1             |
|                    |               |                  |                 |

a About.

b Backwater from ice.

c No evidence of flow during year.

158. Stebbins Creek at mouth, near Ashland, Mont. (6-3077.8)

Location. -- Lat 45°38', long 106°18', in NW sec. 27, T.2 S., R.44 E., at bridge on county road along west side of Tongue River, 3.6 road miles north of U. S. Highway 212, 3½ miles northwest of Ashland.

Drainage area. -- 20.8 sq mi.

Records available .-- April 1963 to

Gage. -- Crest-stage gage installed Apr. 24, 1963. Altitude of gage is 2,950 ft (from topographic map).

| Annual maximum o | <u>la ta • </u> |                  |                 |
|------------------|-----------------|------------------|-----------------|
| Water year       | <u>Date</u>     | Gage height (ft) | Discharge (cfs) |
| 1963             | June 15, 1963   | 2.44             | Not determined  |
| 1964             | June 18, 1964   | 3.40             | Not determined  |
| 1965             | Aug. 23, 1965   | 3.56             | Not determined  |
| 1966             | Mar. 12, 1966   | b 1.85           | a 15            |
| 1967             | July 7, 1967    | 2.44             | Not determined  |

159. Basin Creek tributary near Volborg, Mont. (6-3082)

Location. -- Lat 45°53', long 105°40', in NW sec.31, T.2 N., R.49 E., at culvert on county road, 3½ miles north of Volborg.

Drainage area. -- 0.14 sq mi.

Records available . -- July 1955 to

Gage. -- Crest-stage gage installed July 23, 1955. Altitude of gage is 2,900 ft (from topographic map).

| Annual maximum da | <u>ta</u>                  |                  |                 |
|-------------------|----------------------------|------------------|-----------------|
| Water year        | <u>Date</u>                | Gage height (ft) | Discharge (cfs) |
| 1955              | July 29, 1955              | 0.24             | 20              |
| 1956              |                            |                  | (c)             |
| 1957              |                            |                  | (c)             |
| 1958              | July 2, 1958               | 6.96             | 390             |
| 1959              | July 2, 1958<br>March 1959 |                  | a 2             |
| 1960              | Mar. 21, 1960              | •97              | 12              |
| 1961              |                            |                  | (c)             |
| 1962              | June 17, 1962              | 2.76             | 36              |
| 1963              | June 22, 1963              | 9.38             | 94              |
| 1964              | June 18, 1964              | 1.07             | 14              |
| 1965              | Apr. 1, 1965               | 1.41             | 18              |
| 1966              | July 29, 1966              | 3.11             | 41              |
| 1967              | June 14, 1967              | 8.10             | 85              |
| , - ,             | , , ,                      |                  |                 |

a About.

b Backwater from ice.

c No evidence of flow during year.

Location. -- Lat 45°53', long 105°39', in NW½ sec.32, T.2 N., R.49 E., at bridge on U. S. Highway 212, 4 miles north of Volborg.

rainage area. -- 10.9 sq mi.
Records available. -- July 1955 to

Gage .-- Crest-stage gage installed July 23, 1955. Altitude of gage

is 2,850 ft (from topographic map).

| Annual maximum | <u>data</u>    |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1955           | July 29, 1955  | 1.1              | 20              |
| 1956           | Aug. 27, 1956  | 5.76             | 953             |
| 1957           | Apr. 24, 1957  | 3.45             | 300             |
| 1958           | July 2, 1958   | 5.79             | 965             |
| 1959           | Mar. 11, 1959  | 1.87             | 75              |
| 1960           | Mar. 21, 1960  | 5.26             | 770             |
| 1961           | Sept. 10, 1961 | 1.04             | 18              |
| 1062           | Feb. 11, 1962  | 3.18             | 250             |
| 1962           | June 22, 1963  | 5.69             | 920             |
| 1903           |                | 2 · L g          | 125             |
| 1904           | June 18, 1964  | 2.70             | 1,00            |
| 1900           | Apr. 1, 1965   | 3.93             | 700             |
| 1966           | July 29, 1966  | 2.32             | 125             |
| 1967           | June 14, 1967  | j 6.06           | a 200           |

161. North Fork Sunday Creek tributary at Rock Springs, Mont. (6-3090.2)

Location. -- Lat 46°49', long 106°15', in SE½ sec.1, T.12 N., R.43 E., at culverts on State Highway 22, 0.4 mile northwest of Rock Springs.

Drainage area. -- 1.19 sq mi.

Records available .-- May 1963 to

Gage.--Crest-stage gage installed May 17, 1963. Altitude of gage is 2,970 ft (from topographic map).

Annual maximum data.--

| Alliual manimum | <u>uava</u> •  |                  |                 |
|-----------------|----------------|------------------|-----------------|
| Water year      | Date           | Gage height (ft) | Discharge (cfs) |
| 1963            |                | <del></del>      | (c)             |
| 1964            | June 18, 1964  | 0.38             | ž               |
| 1965            | July 11, 1965  | 1.76             | 23              |
| 1966            | Mar. 13, 1966  | 2.74             | 38              |
| 1967            | Mar. 23, 1967  | ь 1.76           | a 5             |
| 1907            | 1101. 239 1707 | D 1.0/0          | a )             |

a About.

b Backwater from ice.

c No evidence of flow during year.

j Backwater from Pumpkin Creek.

Location. -- Lat 46°41', long 106°10', in NE<sup>1</sup>/<sub>4</sub> sec.27, T.11 N., R.44 E., near bridge on State Highway 22, 3.2 miles south of Angela.

<u>Drainage area.--35.6</u> sq mi. <u>Records available.--May 1963</u> to

Gage. -- Crest-stage gage installed May 17, 1963. Altitude of gage is 2,760 ft (from topographic map).

| Annual maximum C | <u>1a ta </u> |                  |                 |
|------------------|---------------|------------------|-----------------|
| Water year       | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1963             | June 4, 1963  | 3.60             | 380             |
| 1964             | June 18, 1964 | 3.18             | 280             |
| 1965             | Apr. 1, 1965  | 4.13             | 500             |
| 1966             | Mar. 19, 1966 | b 2.08           | a 10            |
| 1967             | June 13, 1967 | 6.65             | 1,700           |

163. North Fork Sunday Creek tributary No. 2 near Angela, Mont. (6-3090.6)

Location. --Lat 46°34', long 106°04', in NE½ sec.4, T.9 N., R.45 E., at culvert on State Highway 22, 14.1 road miles northwest of Yellowstone River bridge at Miles City, 15 miles northwest of Miles City, and 13 miles southeast of Angela.

Drainage area .-- 0.34 sq mi.

Records available .-- June 1962 to

Gage. -- Crest-stage gage installed May 17, 1963. Altitude of gage is 2,680 ft (from topographic map).

| Annual maximum | data           |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1962           | e June 1, 1962 | 2.42             | 45              |
| 1963           | June 3, 1963   | 5.20             | 158             |
| 1964           | June 18, 1964  | 1.47             | 19              |
| 1965           | July 11, 1965  | 4.89             | 144             |
| 1966           | Mar. 19, 1966  | 4.56             | 130             |
| 1967           | June 13, 1967  | 2.77             | 56              |

a About.

b Backwater from ice.

e Prior to installation of gage.

## 164. Deep Creek near Kinsey, Mont. (6-3090.8)

Location. -- Lat 46°33', long 105°38', in SW sec.12, T.9 N., R.48 E., at culvert on Interstate Highway 94 and U. S. Highway 10, 3.1 miles southwest of Shirley railroad station, 2 miles southeast of Kinsey, and 13 miles northeast of Miles City.

Drainage area .-- ll.l sq mi.

Records available .-- July 1962 to

Gage. -- Crest-stage gage installed May 16, 1963. Altitude of gage is 2,320 ft (from topographic map).

Annual maximum data .--

| TITION COLD TWO CONTRACTOR | <u> </u>        |                  |                 |
|----------------------------|-----------------|------------------|-----------------|
| `Water year                | <u>Date</u>     | Gage height (ft) | Discharge (cfs) |
| 1962                       | e July 14, 1962 | 7.80             | 828             |
| 1963                       | June 5, 1963    | 16.77            | 2,420           |
| 1964                       | Aug. 29, 1964   | 13.83            | 1,830           |
| 1965                       | July 11, 1965   | 10.79            | 1,300           |
| 1966                       | June 3, 1966    | 3.61             | 260             |
| 1967                       | June 12, 1967   | 3.93             | 300             |
|                            |                 |                  |                 |

#### 165. Meadow Creek near Locate, Mont. (6-3090.9)

Location. -- Lat 46°22', long 105°30', in center of N½ sec.17, T.7 N., R.50 E., at wooden culvert on State Secondary 333 between U. S. Highway 12 and Mizpah, 3.2 road miles southeast of U. S. Highway 12, and 10 miles southwest of Locate.

Drainage area. -- 6.67 sq mi.

Records available .-- July 1962 to

Gage. -- Crest-stage gage installed Apr. 24, 1963. Altitude of gage is 3,040 ft (from topographic map).

Annual maximum data .--Date Gage height (ft) Water year Discharge (cfs) 1962 e July 14, 1962 1,400 8.6 June 21, 1963 Aug. 29, 1964 1963 .31 Not determined 1964 1.60 Not determined Apr. 1, 1965 1965 2.96 Not determined Mar. 14, 1966 .80 1966 Not determined June 12, 1967 1967 Not determined 1.77

e Prior to installation of gage.

Location. -- Lat 45°26', long 105°26', in  $SE_{\frac{1}{4}}$  sec. 5, T.5 S., R.51 E., at culverts on Moorhead road, 1.8 miles southwest of Broadus.

Drainage area. -- 10.6 sq mi.

Records available .-- July 1955 to

Gage. -- Crest-stage gage installed July 22, 1955. Altitude of gage is 3,090 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1955           | and and       |                  | (c)             |
| 1956           | Mar. 16, 1956 | 1.75             | 19              |
| 1957           | Aug. 28, 1957 | 1.55             | 15              |
| 1958           | June 7, 1958  | 3.95             | 93              |
| 1959           | Mar. 18, 1959 | 4.79             | 252             |
| 1960           | Mar. 20, 1960 | b 4.78           | a 150           |
| 1961           |               | ==               | (c)             |
| 1962           | June 11, 1962 | 2.85             | 50              |
| 1963           | Feb. 5, 1963  | 2.00             | 23              |
| 7.06)          |               | 1.58             | 2)              |
| 1904           | June 8, 1964  |                  | 13<br>53        |
| 1965           | Apr. 1, 1965  | 2.96             | 23              |
| 1966           | July 29, 1966 | 1.27             | 7/              |
| 1967           | June 14, 1967 | 1.50             | 75              |
|                |               |                  |                 |

## 167. Meyers Creek near Locate, Mont. (6-3264)

Location .-- Lat 46°23', long 105°17', in SE sec.1, T.7 N., R.51 E., at culvert on county road on east side of Powder River, 3.4 road miles south of U. S. Highway 12, and 3 miles southeast of Locate.

Drainage area. -- 9.58 sq mi. Records available .-- July 1962 to

Gage .-- Crest-stage gage installed Apr. 25, 1963. Altitude of gage is 2,520 ft (from topographic map).

Annual maximum data . --Date Gage height (ft) Discharge (cfs) Water year e July 14, 1962 June 6, 1963 Aug. 29, 1964 Apr. 1, 1965 7.79 1962 500 1,370 1963 8.24 1964 6.62 200 1965 5.00 150 Mar. 14, 1966 55 1966 1.70 190 May 11, 1967 1967 6.13

a About.

b Backwater from ice.

c No evidence of flow during year.

e Prior to installation of gage.

## 168. O'Fallon Creek near Ismay, Mont. (6-3266)

Location. -- Lat 46°25', long 104°46', near center of east edge of sec.30, T.8 N., R.56 E., at bridge on U. S. Highway 12, 11½ miles west of Plevna, 1 mile east of road to Ismay, and 6½ miles southeast of Ismay.

Drainage area. -- 669 sq mi.

Records available .-- July 1962 to

Gage.--Crest-stage gage installed Apr. 26, 1963. Altitude of gage
is 2,590 ft (from topographic map).

| Annual maximum | data            |                  |                        |
|----------------|-----------------|------------------|------------------------|
| Water year     | Date            | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1962           | e July 14, 1962 | 7.23             | 2,480                  |
| 1963           | June 7, 1963    | 4.12             | 950                    |
| 1964           | June 18, 1964   | 4.20             | 980                    |
| 1965           | July 12, 1965   | 7.27             | 2,500                  |
| 1966           | July 26, 1966   | 5.07             | 1,370                  |
| 1967           | June 6, 1967    | 5.62             | 1,640                  |

169. O'Fallon Creek tributary near Ismay, Mont. (6-3266.5)

Location. -- Lat 46°25', long 104°44', in SE4 sec.29, T.8 N., R.56 E., at culvert on U. S. Highway 12, 2 miles east of road to Ismay, 1 mile east of 0'Fallon Creek bridge, and 7 miles southeast of Ismay.

Drainage area. -- 0.17 sq mi.

Records available .-- July 1962 to

Gage.--Crest-stage gage installed Apr. 25, 1963. Altitude of gage is 2,750 ft (from topographic map).

Annual maximum data.--

| TITITION TO THOUSE THE WILL | ua va           |                  |                 |
|-----------------------------|-----------------|------------------|-----------------|
| Water year                  | <u>Date</u>     | Gage height (ft) | Discharge (cfs) |
| 1962                        | e July 14, 1962 | 3.64             | 49              |
| 1963                        | June 7, 1963    | 5.26             | 59              |
| 1964                        | June 18, 1964   | 5.27             | 59              |
| 1965                        | July 12, 1965   | 3.36             | 47              |
| 1966                        | July 26, 1966   | 4.33             | 54              |
| 1967                        | June 23, 1967   | 5.55             | 61              |
|                             |                 |                  |                 |

e Prior to installation of gage.

## 170. Deep Creek near Baker, Mont. (6-3267)

Location. -- Lat 46°18', long 104°18', in SW sec.2, T.6 N., R.59 E., at culverts on State Highway 7, 5.0 road miles south of U.S. Highway 12 in Baker, and 5 miles south of Baker.

Drainage area. -- 1.55 sq mi.

Records available. -- July 1962 to

Gage. -- Crest-stage gage installed Apr. 25, 1963. Altitude of gage is 3,080 ft (from topographic map).

| Annual maximum | data           |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1962           | e July 7, 1962 | 2.64             | 86              |
| 1963           | July 11, 1963  | 2.55             | 80              |
| 1964           | June 8, 1964   | 3.90             | 190.            |
| 1965           | July 12, 1965  | 3.29             | 136             |
| 1966           | July 13, 1966  | 3.87             | 185             |
| 1967           | May 8, 1967    | 2.09             | 54              |
| -/-/           | v 7 = / - (    | ,                |                 |

## 171. Pennel Creek near Baker, Mont. (6-3268)

Location. -- Lat 46°29', long 104°14', in center of south edge of sec.36, T.9 N., R.59 E., at culvert on State Highway 7, 7.8 miles north of U. S. Highway 12 in Baker, and 8 miles north of Baker.

Drainage area. -- 1.00 sq mi.

Records available. -- July 1962 to Gage. -- Crest-stage gage installed Apr. 25, 1963. Altitude of gage is 3,090 ft (from topographic map).
Annual maximum data.--

| WII | marimum inarimum | <u>uava</u> .  |                  |                 |
|-----|------------------|----------------|------------------|-----------------|
|     | Water year       | Date           | Gage height (ft) | Discharge (cfs) |
|     | 1962             | e July 7, 1962 | 6.0              | 21+0            |
|     | 1963             | June 5, 1963   | . 8.51           | 350             |
|     | 1964             | June 18, 1964  | 1.94             | 85              |
|     | 1965             | Apr. 9, 1965   | 1.98             | 88              |
|     | 1966             | June 4, 1966   | 2.28             | 97              |
|     | 1967             | June 14, 1967  | 1.94             | 40 .            |
|     |                  |                |                  |                 |

e Prior to installation of gage.

172. Yellowstone River tributary No. 4 near Fallon, Mont. (6-3269)

Location. -- Lat 46°52', long 105°06', in SW sec. 23, T.13 N., R.52 E., at culvert on Interstate Highway 94 and U. S. Highway 10, 0.5 mile northeast of the north end of the Yellowstone River bridge near Fallon, and 2 miles north of Fallon.

Drainage area. -- 0.67 sq mi.

Records available .-- July 1962 to

Gage. -- Crest-stage gage installed May 17, 1963. Altitude of gage is 2,250 ft (from topographic map).

| Annual maximum | data            |                  |                        |
|----------------|-----------------|------------------|------------------------|
| Water year     | Date            | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1962           | e July 14, 1962 | 9.58             | 3,38                   |
| 1963           | June 6, 1963    | .67              | a 40                   |
| 1964           | June 8, 1964    | 1.05             | 55                     |
| 1965           | July 12, 1965   | 1.36             | 60                     |
| 1966           |                 | spe ma           | (c)                    |
| 1967           | May 13, 1967    | 2.20             | 105                    |
| , - 1          |                 |                  |                        |

173. Yellowstone River tributary No. 5 near Marsh, Mont. (6-3269.5)

Location. -- Lat 46°57', long 104°54', in SW1 sec.21, T.14 N., R.54 E., at culvert on Interstate Highway 94 and U. S. Highway 10, 2.4 miles northeast of Cracker Box Creek, 2.5 miles southwest of Clear Creek, and 5 miles northeast of Marsh.

Drainage area. -- 0.87 sq mi.
Records available -- July 1962 to

Records available. -- July 1962 to

Gage. -- Crest-stage gage installed May 17, 1963. Altitude of gage is 2,300 ft (from topographic map).

| Annual maximum | data            |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs) |
| 1962           | e July 14, 1962 | 2.97             | 127             |
| 1963           | June 6, 1963    | 1.40             | 12              |
| 1964           | June 8, 1964    | •70              | 2               |
| 1965           | Apr. 1, 1965    | b 2.81           | a 10            |
| 1966           | June 4, 1966    | 1.68             | a 20            |
| 1967           | May 13, 1967    | .66              | 2               |
|                | - /             |                  |                 |

a About.

b Backwater from ice.

e Prior to installation of gage.

## 174. Krug Creek tributary near Wibaux, Mont. (6-3277)

Location. -- Lat 47°01', long 104°19', in NW 1NW 1 sec. 36, T.15 N., R.58 E., at culvert on Interstate Highway 94 and U. S. Highway 10, 8 miles northwest of Wibaux.

Drainage area. -- 1.74 sq mi.

Records available. -- June 1955 to September 1961 (discontinued).

Gage. -- Crest-stage gage installed June 30, 1955. Altitude of gage is 2,720 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1955           |               |                  | (c)             |
| 1956           | March 1956    | 0.23             | 1               |
| 1957           | Mar. 20, 1957 | 1.61             | 18              |
| 1958           | July 3, 1958  | 2.70             | 49              |
| 1959           | Mar. 18, 1959 | .60              | á               |
| 1960           | June 12, 1960 | 3.00             | 70              |
| 1961           |               |                  | (c)             |
| / -            |               |                  | , ,             |

## 175. Griffith Creek near Glendive, Mont. (6-3278)

Location. -- Lat 47°06', long 104°34', in NE½ sec.36, T.16 N., R.56 E., near bridge on Interstate Highway 94 and U. S. Highway 10, 8 miles east of Glendive.

Drainage area. -- 15.5 sq mi.

Records available. -- June 1955 to September 1963, June 1965 to September 1967 (discontinued).

Gage. -- Crest-stage gage installed June 30, 1955. Altitude of gage is 2,220 ft (from topographic map).
Annual maximum data. --

| AIII | lual maximum | <u>data</u>   |        |          |           |             |
|------|--------------|---------------|--------|----------|-----------|-------------|
|      | Water year   | <u>Date</u>   | Gage h | neight ( | ft) Disch | narge (cfs) |
|      | 1955         | July 28, 1955 |        | 1.80     |           | a 100       |
|      | 1956         | Mar. 19, 1956 |        | .86      |           | a 80        |
|      | 1957         | Mar. 20, 1957 |        | .27      |           | 50          |
|      | 1958         | July 3, 1958  | ¢.     | • 55     |           | 101         |
|      | 1959         | Mar. 17, 1959 |        | .74      |           | 157         |
|      | 1960         | Mar. 20, 1960 |        | 1.41     | Not       | determined  |
|      | 1961         | June 29, 1961 |        | 3.96     | Not       | determined  |
|      | 1962         | June 6, 1962  |        | .82      |           | 21          |
|      | 1963         | June 22, 1963 | •      | 1.70     | Not       | determined  |
|      | 1965         | June 16, 1965 |        |          |           | 4,600       |
|      | 1966         | Mar. 11, 1966 |        |          |           | a 150       |
|      | 1967         | June 14, 1967 |        | 1.68     |           | a 30        |
|      |              | •             |        |          |           |             |

a About.

c No evidence of flow during year.

## 176. Linden Creek at Intake, Mont. (6-3287)

Location. -- Lat 47°18', long 104°31', in NE sec. 25, T.18 N., R.56 E., at bridge on State Highway 16, three-quarters of a mile northeast of Intake.

Drainage area .-- 5.01 sq mi.

Records available .-- March 1958 to

Gage.--Crest-stage gage installed Mar. 11, 1958. Altitude of gage
is 2,080 ft (from topographic map).

Cooperation. -- Montana Water Conservation Board.

| Annual maximum | uata                          |                  |                 |
|----------------|-------------------------------|------------------|-----------------|
| Water year     | Date                          | Gage height (ft) | Discharge (cfs) |
| 1958           | July 3, 1958                  | 0.98             | 6               |
| 1959           | Sept. 21, 1959                | 1.54             | 12              |
| 1960           | June 21, 1960                 | 1.35             | 10              |
| 1961           |                               |                  | (c)             |
| 1962           | June 15, 1962                 | 1.46             | 10              |
| 1963           | June 15, 1962<br>Feb. 5, 1963 | 2.38             | a 30            |
| 1964           |                               |                  | (c)             |
| 1965           | June 16, 1965                 | 1.63             | 11              |
| 1966           | July 2, 1966                  | 1.11             | 7+              |
| 1967           | June 14, 1967                 | 1.36             | 7               |
|                |                               |                  |                 |

### 177. Indian Creek at Intake, Mont. (6-3288)

Location. -- Lat 47°17', long 104°32', in SW sec.25, T.18 N., R.56 E., at culvert on State Highway 16, 500 ft northeast of Intake.

<u>Drainage area.</u>--0.45 sq mi. <u>Records available.</u>--March 1958 to

Gage. -- Crest-stage gage installed Mar. 11, 1958. Altitude of gage is 2,090 ft (from topographic map).

Cooperation. -- Montana State Water Conservation Board.

| AITHUAL MAAIMUM   | uava •         |                  |                 |
|-------------------|----------------|------------------|-----------------|
| <u>Water year</u> | <u>Date</u>    | Gage height (ft) | Discharge (cfs) |
| 1958              | July 3, 1958   | 3.23             | Not determined  |
| 1959              | Sept. 21, 1959 | 3.28             | Not determined  |
| 1960              | Mar. 20, 1960  | . 60             | (c)             |
| 1961              | Mar. 13, 1961  | 1.04             | (c)             |
| 1962              | Aug. 10, 1962  | 2.93             | Not determined  |
| 1963              | Feb. 5, 1963   | 1.83             | 3               |
| 1964              | June 8, 1964   | 2.08             | 6               |
| 1965              | June 16, 1965  | 3.18             | Not determined  |
| 1966              | July 2, 1966   | 2.40             | 13              |
| 1967              | February 1967  | 2.14             | 7               |
| , ,               | • • •          |                  |                 |

a About.

c No evidence of flow during year.

## 178. War Dance Creek near Intake, Mont. (6-3289)

Location. --Lat 47°20', long 104°29', in  $SW_{\frac{1}{4}}$  sec. 8, T.18 N., R.57 E., at culvert on State Highway 16,  $3\frac{1}{2}$  miles northeast of Intake.

Drainage area. -- 4.31 sq mi.

Records available. -- March 1958 to

Gage. -- Crest-stage gage installed Mar. 11, 1958. Altitude of gage is 2,080 ft (from topographic map).

Cooperation .-- Montana State Water Conservation Board.

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water vear     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1958           |               |                  | (c)             |
| 1959           | Mar. 17, 1959 | 1.96             | Not determined  |
| 1960           | Mar. 20, 1960 | 1.83             | Not determined  |
| 1961           |               |                  | (c)             |
| 1962           | June 6, 1962  | . 94             | Not determined  |
| 1963           | Feb. 5, 1963  | 22               | 0.1+            |
| 1964           |               |                  | (c)             |
| 1965           | June 16, 1965 | .81              | Not determined  |
| 1966           |               |                  | (c)             |
| 1967           | March 1967    | 1.36             | Not determined  |
|                |               |                  |                 |

## 179. First Hay Creek near Sidney, Mont. (6-3295.7)

Location. -- Lat 47°50', long 104°16', in SE<sup>1</sup>/<sub>4</sub> sec.16, T.24 N., R.58 E., at bridge on State Highway 16, 4.1 road miles north of "Dryland Crop and Soils Research Station" sign, and 10 miles northwest of Sidney.

Drainage area. -- 30.0 sq mi.
Records available. -- May 1963 to

Gage. -- Crest-stage gage installed May 20, 1963. Altitude of gage is 2,170 ft (from topographic map).

Annual maximum data.--Discharge (cfs) Gage height (ft) Water year Date Aug. 23, 1963 July 5, 1964 Apr. 8, 1965 1963 1.02 1964 15 .90 1965 a 100 1966 March 1966 2.15 120 1967 March 1967 2.10 115

a About.

c No evidence of flow during year.

## 180. North Creek near Alzada, Mont. (6-3329)

Location .-- Lat 45°04', long 104°31', in SE4NW4 sec. 7, T.9 S., R.59 E., 8 miles northwest of Alzada.

Drainage area. -- 0.68 sq mi.
Records available. -- May to September 1951 (continuous record), July 1955 to

Gage .-- Water-stage recorder re-installed July 21, 1955. Altitude of gage is 3,480 ft (by barometer).
Annual maximum data.--

| Almual maximum | data           |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1951           | June 17, 1951  | 5.18             | 260             |
| 1955           |                |                  | (c)             |
| 1956           | July 2, 1956   | 4.32             | 276 ·           |
| 1957           | Aug. 28, 1957  | 4.32             | 276             |
| 1958           | June 3, 1958   | 4.66             | 417             |
| 1959           | June 30, 1959  | 3.21             | 58              |
| 1960           | Aug. 17, 1960  | 3.77             | 142             |
| 1961           | Sept. 18, 1961 | 4.05             | 203             |
| 1962           | May 21, 1962   | 5 <b>.</b> 47    | a 1,100         |
| 1963           | June 14, 1963  | 5.23             | 791             |
| 1964           | June 22, 1964  | 3.22             | 34              |
| 1965           | July 1, 1965   | 4.82             | 486             |
| 1966           | July 28, 1966  | 2.92             | 15              |
| 1967           | June 5, 1967   | 5.19             | 790             |

a About.

c No evidence of flow during year.

## 181. Wolf Creek near Hammond, Mont. (6-3341)

Location.--Lat 45°10', long 104°45', in SE½ sec.5, T.8 S., R.57 E., at culvert on U. S. Highway 212, 8 miles southeast of Hammond. Drainage area.--9.09 sq mi.

Records available. -- July 1955 to

Gage.--Crest-stage gage installed July 22, 1955. Altitude of gage is 3,590 ft (from topographic map).

| Annual maximum | <u>data</u>     |                  |                 |
|----------------|-----------------|------------------|-----------------|
| Water year     | Date            | Gage height (ft) | Discharge (cfs) |
| 1955           | e July 11, 1955 | 4.08             | 298             |
| 1956           | Mar. 22, 1956   | 3.45             | 175             |
| 1957           | Aug. 29, 1957   | 4.58             | 365             |
| 1958           | June 3, 1958    | 5.76             | 550             |
| 1959           | Mar. 19, 1959   | 3.32             | 154             |
| 1960           | Mar. 21, 1960   | 5.26             | 485             |
| 1961           | Sept. 18, 1961  | 2.31             | 30              |
| 1962           | May 21, 1962    | 5.62             | 540             |
| 1963           | Aug. 3, 1963    | 3.54             | 190             |
| 1964           | June 22, 1964   | 3.85             | 21+0            |
| 1965           | Aug. 22, 1965   | 12.38            | 1,170           |
| 1966           | July 28, 1966   | 5.66             | 555             |
| 1967           | June 14, 1967   | 9.94             | 1,100           |

e Prior to installation of gage.

## 182. Willow Creek near Alzada, Mont. (6-3342)

Location. -- Lat 45°06', long 104°35', in center of sec. 27, T.8 S., R.58 E., near bridge on U. S. Highway 212, 11 miles northwest of Alzada.

Drainage area. -- 123 sq mi.

Records available. -- May 1958 to

Gage. -- Crest-stage gage installed May 8, 1958. Altitude of gage is 3,460 ft (from topographic map).

Cooperation. -- Montana State Water Conservation Board.

| Alliual maximum | uata           |                  |                        |
|-----------------|----------------|------------------|------------------------|
| Water year      | Date           | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1958            | June 5, 1958   | 7.54             | 455                    |
| 1959            | Mar. 19, 1959  | 7.31             | 548                    |
| 1960            | Mar. 23, 1960  | 11.19            | a 1,350                |
| 1961            | Sept. 18, 1961 | 1.77             | 40                     |
| 1962            | May 21, 1962   | 11.98            | a 1,700                |
| 1963            | Aug. 3, 1963   | 7.28             | 480                    |
| 1964            | June 22, 1964  | 4.84             | 200                    |
| 1965            | Aug. 22, 1965  | 8.39             | 550                    |
| 1966            | July 28, 1966  | 4.97             | 220                    |
| 1967            | June 14, 1967  | 12.57            | 1,800                  |
|                 |                |                  |                        |

183. North Fork Coal Bank Creek near Mill Iron, Mont. (6-3346.4)

Location. -- Lat 45°56', long 104°05', in SW1 sec.12, T.2 N., R.61 E., at bridge on county road, 5 miles south of Soda Creek tributary crest-stage gage, 11 miles southeast of Webster, and 9 miles northeast of Mill Iron.

Drainage area. -- 15.0 sq mi.

Records available .-- May 1962 to

Gage.--Crest-stage gage installed Apr. 26, 1963. Altitude of gage is 3,040 ft (from topographic map).

| Amidal maximum    | <u>uata</u>    |                  |                 |
|-------------------|----------------|------------------|-----------------|
| <u>Water year</u> | Date           | Gage height (ft) | Discharge (cfs) |
| 1962              | e May 22, 1962 | 4.72             | Not determined  |
| 1963              | July 10, 1963  | 2.65             | Not determined  |
| 1964              | June 9, 1964   | 1.70             | 210             |
| 1965              | Aug. 23, 1965  | 1.27             | 150             |
| 1966              | March 1966     | b 1.90           | a 100           |
| 1967              | May 7, 1967    | 1.60             | 195             |

a About.

b Backwater from ice.

e Prior to installation of gage.

Location. -- Lat 46°Ol', long 104°O6', in NE<sup>1</sup>/<sub>4</sub> sec.23, T.3 N., R.61 E., at culvert on county road, 0.3 miles south of Soda Creek, and 8 miles southeast of Webster.

Drainage area. -- 2.22 sq mi.

Records available .-- May 1962 to

Gage. -- Crest-stage gage installed Apr. 26, 1963. Altitude of gage is 3,100 ft (from topographic map).

| Annual maximum | <u>data</u>    |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | Date           | Gage height (ft) | Discharge (cfs) |
| 1962           | e May 22, 1962 | 5.19             | 106             |
| 1963           | July 10, 1963  | 1.57             | 12              |
| 1964           | Aug. 29, 1964  | 2.55             | 28              |
| 1965           | July 5, 1965   | 1.05             | 7               |
| 1966           | Mar. 14, 1966  | 1.00             | _ 9             |
| 1967           | June 14, 1967  | 1.7              | 12              |

## 185. Spring Creek near Wibaux, Mont. (6-3364.5)

Location. -- Lat 46°53', long 104°12', in sec.14, T.13 N., R.59 E., near bridge on State Highway 7, 7 miles south of Wibaux.

Drainage area. -- 3.88 sq mi.

Records available . -- June 1955 to

Gage.--Crest-stage gage installed June 29, 1955. Altitude of gage
is 2,770 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1956           | March 1956    | 0.67             | 61              |
| 1957           | Sept. 5, 1957 | 1.36             | 127             |
| 1958           | March 1958    | · 51+            | 52              |
| 1959           | Mar. 21, 1959 | 1.18             | 108             |
| 1960           | Mar. 20, 1960 | . 84             | 76              |
| 1961           |               |                  | (c)             |
| 1962           | July 19, 1962 | 3.34             | 438             |
| 1963           | Feb. 5, 1963  | 57               | 53              |
| 1964           | July 5, 1964  | . 95             | áš              |
| 1965           | Apr. 1, 1965  | b 1.91           | a 100           |
| 1966           | Mar. 11, 1966 | 1 32             | 125             |
| 1967           | March 1967    | b 1.57           | a ló            |
| 1907           | 1101 011 1907 | D = 0)/          | u = 0           |

a About.

b Backwater from ice.

c No evidence of flow during year.

e Prior to installation of gage.

#### COLUMBIA RIVER BASIN

186. Fortine Creek near Trego, Mont. (12-3005)

Location. -- Lat 48°39', long 114°55', in NE4 sec.11, T.33 N., R.26 W., 5½ miles southwest of Trego.

Drainage area. -- 112 sq mi.

Records available .-- December 1946 to September 1953 (continuous re-

cord), 1954, May 1958 to

<u>Gage.--Crest-stage gage installed July 1, 1959. Wire-weight gage</u>

<u>December 1946 to September 1953. Altitude of gage is 3,340 ft</u> (from topographic map). Annial marinim data \_\_

| Annual maximum | aata          |                  |                    |
|----------------|---------------|------------------|--------------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs)    |
| 1947           | Apr. 29, 1947 | 10.24            | 948                |
| 1948           | May 22, 1948  | 10.46            | 1,000              |
| 1949           | May 11, 1949  | 9.34             | d´754              |
| 1950           | May 16, 1950  | 11.8             | 1,810              |
| 1951           | May 7, 1951   | 9.95             | <sup>2</sup> 875   |
| 1952           | Apr. 28, 1952 | 9.65             | 798                |
| 1953           | May 7, 1953   | 9.90             | 860                |
| 1954           | May 20, 1954  | 11.8             | 1,810              |
| 1958           | May 24, 1958  | 10.2             | a <sup>2</sup> 850 |
| .1959          |               |                  | Unknown            |
| 1960           | Apr. 8, 1960  | 9.7              | 700                |
| 1961           | May 11, 1961  | a 10.0           | a 700              |
| 1962           | Apr. 19, 1962 | 8.96             | 540                |
| 1963           | Apr. 26, 1963 | 6.01             | 360                |
| 1964           | May 18, 1964  | 9.48             | 600                |
| 1965           | Apr. 27, 1965 | 11.13            | 1,060              |
| 1966           | May 4, 1966   | 8.51             | 500                |
| 1967           | May 23, 1967  | 11.34            | 1,160              |
| · '            | 3, -, -,      | ==•5             | - , - 00           |

a About.

d Maximum observed.

Location. -- Lat 48°46', long 114°53', in SW sec. 30, T.35 N., R.25 W., at culvert on county road, 14 miles east of Fortine.

Drainage area. -- 17.9 sq mi.
Records available. -- July 1959 to

Gage. -- Crest-stage gage installed July 1, 1959. Altitude of gage is 3,000 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1959           | (k)           | 2.8              | 150             |
| 1960           | June 6, 1960  | 2.67             | 138             |
| 1961           | May 31, 1961  | 2.92             | 161             |
| 1962           | May 28, 1962  | 1.75             | 82              |
| 1963           | June 22, 1963 | 2.26             | 108             |
| 1964           | June 8, 1964  | 4.90             | 310             |
| 1965           | May 28, 1965  | 3.28             | 180             |
| 1966           | May 4, 1966   | 4.20             | 208             |
| 1967           | May 24, 1967  | 3.06             | 140             |
| 7 - 1          | , , ,         |                  |                 |

188. Kootenai River tributary near Rexford, Mont. (12-3017)

Location. -- Lat 48°48', long 115°18', in SE½ sec.11, T.35 N., R.29 W., at culvert on State Highway 37, 7 miles southwest of Rexford. Drainage area. -- 1.11 sq mi.

Records available .-- July 1959 to

Gage.--Crest-stage gage installed July 1, 1959. Altitude of gage
is 2,280 ft (from topographic map).

| Annual maximum | <u>data</u>  |                  |                 |
|----------------|--------------|------------------|-----------------|
| Water year     | <u>Date</u>  | Gage height (ft) | Discharge (cfs) |
| 1959           | (k)          | 0.5              | 2               |
| 1960           | Apr. 8, 1960 | 1.25             | 9               |
| 1961           | May 12, 1961 | 1.28             | 9               |
| 1962           | May 21, 1962 | . 1.16           | 8               |
| 1963           | May 14, 1963 | •55              | 3               |
| 1964           | May 21, 1964 | 1.00             | 7               |
| 1965           | May 27, 1965 | 1.10             | 8               |
| 1966           | May 4, 1966  | .88              | 6               |
| 1967           | May 22, 1967 | 1.48             | 12              |

### 189. Gold Creek near Rexford, Mont. (12-3018)

Location. -- Lat 48°47', long 115°19', in NW<sup>1</sup>/<sub>4</sub> sec.23, T.35 N., R.29 W., at culvert on State Highway 37, 8 miles southwest of Rexford.

Drainage area. -- 6.04 sq mi.
Records available. -- July 1959 to

Gage.--Crest-stage gage installed July 1, 1959. Altitude of gage is 2,260 ft (from topographic map).

| <u>data</u>   |   |  |
|---------------|---|--|
| Date          | Gage height (ft)  | <u>Discharge (cfs)</u>   |
| (k)           | 1.5   | 103  |
| Apr. 8, 1960  | .85   | 55   |
| May 21, 1961  | •97   | 64   |
| May 12, 1962  | •78   | 50   |
| May 14, 1963  | .27   | 22   |
| May 20, 1964  | • 93  | 61   |
| Apr. 27, 1965 | • 95  | 62   |
| May 4, 1966   | •91   | _60  |
| May 22, 1967  | 1.85  | 134  |
|               | Date<br>(k)<br>Apr. 8, 1960<br>May 21, 1961<br>May 12, 1962<br>May 14, 1963<br>May 20, 1964<br>Apr. 27, 1965<br>May 4, 1966 | Date (k) 1.5  Apr. 8, 1960 .85  May 21, 1961 .97  May 12, 1962 .78  May 14, 1963 .27  May 20, 1964 .93  Apr. 27, 1965 .95  May 4, 1966 .91 |

### 190. Little Jackson Creek near Libby, Mont. (12-3019)

Location. -- Lat 48°27', long 115°19', in center sec.16, T.31 N., R.29 W., at culvert on State Highway 37, 12 miles northeast of Libby.

Drainage area. -- 2.60 sq mi.

Records available .-- May 1961 to

Gage. -- Crest-stage gage installed May 16, 1961. Altitude of gage is 2,180 ft (from topographic map).

| AIIIIual maximum | uaua                                  |                  |                 |
|------------------|---------------------------------------|------------------|-----------------|
| Water year       | Date                                  | Gage height (ft) | Discharge (cfs) |
| 1961             | e May 15, 1961                        | 0.4              | 13              |
| 1962             |                                       | (f)              | < 7+            |
| 1963             | February 1963                         | b .22            | a 5             |
| 1964             |                                       | (f)              | < 7+            |
| 1965             | April 1965 .                          | .36              | 12              |
| 1966             |                                       | (f)              | < 14            |
| 1967             | June 28, 1967                         | 02               | 1               |
|                  | · · · · · · · · · · · · · · · · · · · |                  |                 |

a About.

b Backwater from ice.

e Prior to installation of gage.

f Peak did not reach bottom of gage.

k Peak flow occurred sometime during period May-June.

191. Peoples Creek near Libby, Mont. (12-3020.5)

Location. -- Lat 45°20', long 115°19', in NW sec. 28, T.30 N., R.29 W., at culver on private road 12 miles east of Libby.

Drainage area. -- 2.65 sq mi.

Records available. -- May 1961 to September 1967 (discontinued).

Gage. -- Crest-stage gage installed May 16, 1961. Altitude of gage

is 2,200 ft (from topographic map).

| Annual maximum | <u>aata</u>    |                   |                 |
|----------------|----------------|-------------------|-----------------|
| Water year     | Date           | Gage height (ft)  | Discharge (cfs) |
| 1961           | e May 15, 1961 | 0.3               | 10              |
| 1962           | May 18, 1962   | •05               | 7+              |
| 1963           | <u></u>        | (f) <sub>(</sub>  | <0.5            |
| 1964           | Apr. 21, 1964  | 04                | ļ               |
| 1965           | Apr. 27, 1965  | •46               | 15              |
| 1966           | May 12, 1966   | •3 <del>\</del> + | a 2             |
| 1967           | May 22, 1967   | •34               | 1               |

## 192. Severn Gulch near Jennings, Mont. (12-3021)

Location. -- Lat 48°22', long 115°24', in SE½ sec.14, T.30 N., R.30 W., at culvert on private road, 3 miles west of Jennings.

Drainage area .-- 1.16 sq mi.

Records available. -- July 1959 to May 1961 (discontinued).

Gage .-- Crest-stage gage installed July 2, 1959.

| Annual maximum | data       | · ·              |                 |
|----------------|------------|------------------|-----------------|
| Water year     | Date       | Gage height (ft) | Discharge (cfs) |
| 1960           | April 1960 | . 0.03           | a l             |
| 1961           |            |                  | Unknown         |

a About.

e Prior to installation of gage.

f Peak discharge did not reach bottom of gage.

## 193. Tub Gulch near Libby, Mont. (12-3022)

Location. -- Lat  $48^{\circ}25'$ , long  $115^{\circ}28'$ , in  $NE_{4}^{1}SE_{4}^{1}$  sec. 29, T.31 N., R.30 W., at culvert on State Highway 37, 4 miles northeast of Libby.

Drainage area. -- 1.47 sq mi.
Records available. -- July 1959 to May 1961 (discontinued).

Gage. -- Crest-stage gage installed July 2, 1959.

Annual maximum data. --

| Water year | Date         | Gage height (ft) | Discharge (cfs) |
|------------|--------------|------------------|-----------------|
| 1960       | June 3, 1960 | -0.18            | Unknown         |
| 1961       |              |                  | Unknown         |

## 194. Shaughnessy Creek near Libby, Mont. (12-3024)

Location. -- Lat 48°18', long 115°36', in W2 sec. 5, T.29 N., R.31 W., at culvert on county road, 62 miles southwest of Libby.

Drainage area. -- 1.11 sq mi. Records available. -- July 1959 to

Gage .-- Crest-stage gage installed July 2, 1959. Altitude of gage is 2,820 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1959           | (k)           | 0.4              | 16              |
| 1960           |               | (f)              | <4              |
| 1961           | Mar. 30, 1961 | •73              | 33              |
| 1962           | May 16, 1962  | .67              | 29              |
| 1963           | Apr. 4, 1963  | •09              | 6               |
| 1964           | April 1964    | •39              | a 16            |
| 1965           | April 1965    | • 97             | 48              |
| 1966           | May 4, 1966   | • 35             | 14              |
| 19 67          | May 22, 1967  | .ŏ3              | 6               |
|                |               |                  |                 |

a About.

f Peak discharge did not reach bottom of gage.

k Peak flow occurred sometime during period May-June.

Location. -- Lat 48°50', long 115°49', in NE sec.1, T.35 N., R.33 W., 500 ft upstream from mouth, 5 miles west of Yaak.

Drainage area. -- 2.61 sq mi.

Records available. -- July 1960 to

Gage. -- Crest-stage gage installed July 15, 1960. Altitude of gage
is 2,930 ft (from topographic map).

Annual maximum data. --

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           | (k)           | 0.7              | 33              |
| 1961           | May 1, 1961   | 1.02             | 49              |
| 1962           | May 21, 1962  | •45              | 11              |
| 1963           | Apr. 4, 1963  | <b>.</b> 58      | 15              |
| 1964           | May 22, 1964  | •70              | 31              |
| 1965           | Apr. 26, 1965 | •96              | 42              |
| 1966           | May 4, 1966   | •79              | 23              |
| 1967           | May 22, 1967  | .88              | 26              |
|                | •             |                  |                 |

## 196. Cyclone Creek near Yaak, Mont. (12-3043)

Location .-- Lat 48°45', long 115°54', in SE sec. 32, T.35 N., R.33 W., at bridge a quarter of a mile upstream from mouth, 102 miles southwest of Yaak.

Drainage area. -- 5.66 sq mi.

Records available .-- July 1960 to

Gage. -- Crest-stage gage installed July 15, 1960. Altitude of gage is 2,790 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           | (k)           | 2.06             | 220             |
| 1961           | May 26, 1961  | 1.78             | 172             |
| 1962           | May 21, 1962  | 1.26             | 97              |
| 1963           | ipr. 4, 1963  | 1.58             | 133             |
| 1964           | May 22, 1964  | 1.94             | 150             |
| 1965           | Apr. 27, 1965 | 1.38             | 73              |
| 1966           | May 4, 1966   | 1.56             | 130             |
| 1967           | May 31, 1967  | 1.57             | 140             |

k Peak flow occurred sometime during period May-June.

## 197. Fourth of July Creek near Yaak, Mont. (12-3044)

Location. -- Lat 48°42', long 115°52', in NW sec. 22, T.34 N., R.33 W., at bridge 500 ft upstream from mouth, 12 miles southwest of Yaak. Drainage area. -- 7.70 sq mi.

Records available .-- July 1960 to

Gage .-- Crest-stage gage installed July 14, 1960. Altitude of gage is 2,650 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1960           | (k)           | 2.5              | 258             |
| 1961           | May 26, 1961  | 2.06             | 196             |
| 1962           | Apr. 19, 1962 | 1.60             | 138             |
| 1963           | Apr. 14, 1963 | •95              | 61              |
| 1964           | May 22, 1964  | 2.20             | 190             |
| 1965           | Apr. 26, 1965 | 1.98             | 165             |
| 1966           | May 4, 1966   | 2.00             | 188             |
| 1967           | May 22, 1967  | 2.19             | 215             |

### 198. Smith Gulch near Silverbow, Mont. (12-3233)

Location. -- Lat 45°57', long 112°40', in N2 sec.1, T.2 N., R.9 W., at culvert on Interstate Highway 15 and U. S. Highway 91, 4 miles south of Silverbow.

Drainage area. -- 4.85 sq mi.

Records available .-- May 1959 to

Gage. -- Crest-stage gage installed May 11, 1959. Altitude of gage is 5,510 ft (from topographic map).

| Annual maxi | mum data        |                  |                 |
|-------------|-----------------|------------------|-----------------|
| Water ye    | ar Date         | Gage height (ft) | Discharge (cfs) |
| 1959        |                 |                  | a 5             |
| 1960        | Mar. 21, 1960   | 1.97             | 43              |
| 1961        | Sept. 11, 1961  | 2.41             | 67              |
| 1962        | Apr. 14, 1962 · | 1.70             | 32              |
| 1963        | Feb. 4, 1963    | 4.91             | 80              |
| 1964        | Mar. 30, 1964   | 3.04             | 10              |
| 1965        | Dec. 23, 1964   | 5.75             | 123             |
| 1966        | Mar. 30, 1966   | 3.04             | 9               |
| 1967        | May 8,1967      | 3.28             | 19              |

a About.

k Peak flow occurred sometime during period May-June.

199. Clark Fork tributary near Drummond, Mont. (12-3247)

Location .-- Lat 46°37', long 113°02', in SW sec. 18, T.10 N., R.11 W., half a mile upstream from Interstate Highway 90 and U. S. Highway 10, 6t miles east of Drummond. Drainage area. -- 4.61 sq mi.

Records available .-- June 1959 to

Gage. -- Crest-stage gage installed June 17, 1959. Altitude of gage is 4,080 ft (from topographic map).

| Annual maximum | data   | -        |                  |                 |
|----------------|--------|----------|------------------|-----------------|
| Water year     |        | Date     | Gage height (ft) | Discharge (cfs) |
| 1958           | e June | 9, 1958  | 1.64             | 133             |
| 1959           |        |          |                  | (c)             |
| 1960           | Mar.   | 18, 1960 | 1.62             | 84              |
| 1961           | Apr.   | 3, 1961  | •70              | 20              |
| 1962           | Apr.   | 4, 1962  | .62              | 18              |
| 1963           | Feb.   | 4, 1963  | 1.1+1+           | 56              |
| 1964           | Mar.   | 31, 1964 | •98              | 21              |
| 1965           | Feb.   | 5, 1965  | 1.53             | 64              |
| 1966           | Mar.   | 9, 1966  | 2.00             | 125             |
| 1967           | Mar.   | 18, 1967 | • <b>5</b> 5     | 15              |
| •              |        |          | • •              | · ·             |

### 200. Morris Creek near Drummond, Mont. (12-3248)

<u>Location</u>.--Lat  $46^{\circ}40^{\circ}$ , long 113°06', in  $NW_{\frac{1}{4}}NW_{\frac{1}{4}}$  sec. 34, T.11 N., R.12 W., at culvert on State Secondary Highway 271, 2 miles east of Drummond.

Drainage area. -- 12.6 sq mi.

Records available .-- June 1959 to

Gage .-- Crest-stage gage installed June 17, 1959. Altitude of gage is 4,170 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1960           | Mar. 26, 1960 | 1.23             | 14              |
| 1961           | Apr. 3, 1961  | • 47             | 3               |
| 1962           | Apr. 23, 1962 | • 65             | <u>1</u> +      |
| 1963           | Mar. 21, 1963 | •76              | 6               |
| 1964           | May 20, 1964  | 1.06             | 10              |
| 1965           | May 29, 1965  | .83              | 12              |
| 1966           | Mar. 29, 1966 | .87              | 13              |
| 1967           | Mar. 18, 1967 | .82              | 12              |
| , ,            | , , ,         |                  |                 |

c No evidence of flow during year.

e Prior to installation of gage.

### 201. Edwards Gulch at Drummond, Mont. (12-3317)

Location. -- Lat 46°40', long 113°09', in SW14SW14 sec.29, T.11 N., R.12 W., at culvert on private road, 0.4 miles north of Interstate Highway 90 and U. S. Highway 10 at Drummond.

<u>Drainage area.--4.69</u> sq mi. <u>Records available.--</u>June 1959 to September 1962 (discontinued). Gage. -- Crest-stage gage installed June 17, 1959. Altitude of gage is 4,000 ft (from topographic map).

| Annual maximum | data          |                    |                 |
|----------------|---------------|--------------------|-----------------|
| Water year     | Date          | Gage height (ft)   | Discharge (cfs) |
| 1960           | Mar. 21, 1960 | b 1.14             | Unknown         |
| 1961           | Apr. 3, 1961  | • 1 <sup>1</sup> + | 2               |
| 1962           | Apr. 14, 1962 | • 55               | 8               |

### 202. West Twin Creek near Bonner, Mont. (12-3399)

Location. -- Lat 46°55', long 113°43', in  $NW_{\frac{1}{4}}$  sec. 2, T.13 N., R.17 W., at bridge on State Highway 20, 8 miles east of Bonner.

Drainage area. -- 7.47 sq mi.

Records available .-- June 1959 to

Gage .-- Crest-stage gage installed June 17, 1959. Altitude of gage is 3,410 ft (from topographic map).

Annual maximum data .--

| Water year | Date          | Gage height (ft) | Discharge (cfs) |
|------------|---------------|------------------|-----------------|
| 1959       | June 1959     | 0.7              | 98              |
| 1960       | Apr. 6, 1960  | •63              | 82              |
| 1961       | May 27, 1961  | .91              | 128             |
| 1962       | Apr. 19, 1962 | •92              | 92              |
| 1963       | May 29, 1963  | •63              | 63              |
| 1964       | June 8, 1964  | b 1.10           | a 150           |
| 1965       | Apr. 14, 1965 | 1.33             | a 120           |
| 1966       | May 28, 1966  | .45              | 42              |
| 1 967      | May 22, 1967  | 1.48             | 200             |
| •          | • , , .       |                  |                 |

a About.

b Backwater from ice.

#### 203. Marshall Creek near Missoula, Mont. (12-3402)

Location .-- Lat 46°53', long 113°55', in NW sec.18, T.13 N., R.18 W., at culvert on Interstate Highway 90 and U. S. Highways 10 and 12, 3 miles east of Missoula.

Drainage area. -- 5.47 sq mi.

Records available .-- June 1959 to

Gage .-- Crest-stage gage installed June 19, 1959. Altitude of gage is 3,310 ft (from topographic map).

| Annual maxim | um data       |                  |                 |
|--------------|---------------|------------------|-----------------|
| Water yea    | r <u>Date</u> | Gage height (ft) | Discharge (cfs) |
| 1959         | June 1959     | 0.3              | 13              |
| 1960         | Apr. 7, 1960  | .26              | 11              |
| 1961         | May 27, 1961  | •27              | 12              |
| 1962         | Apr. 25, 1962 | • 53             | 15              |
| 1963         | May 6, 1963   | •38              | 7               |
| 1964         | May 21, 1964  | 1.05             | a 50            |
| 1965         | May 29, 1965  | • 54             | 26              |
| 1966         | April 1966    | .20              | a 10            |
| 1967         | May 22, 1967  | •34              | 10              |
|              |               |                  |                 |

## 204. Burke Gulch near Darby, Mont. (12-3443)

Location .- Lat 46°02', long 114°09', in S\frac{1}{2} sec. 12, T.3 N., R.21 W., 1 mile upstream from mouth,  $1\frac{1}{2}$  miles east of Darby.

Drainage area. -- 6.28 sq mi.

Records available .-- April 1958 to

Gage .-- Staff gage installed Apr. 16, 1958. Crest-stage gage installed July 21, 1959. Altitude of gage is 4,100 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1958           | May 12, 1958  | 0.94             | 11              |
| 1959           | May 16, 1959  |                  | a 5             |
| 1960           | Apr. 7, 1960  | .85              | 8               |
| 1961           | May 27, 1961  | . 40             | 2               |
| 1962           | May 1962      | (f)              | a 4             |
| 1963           | February 1963 | 1.08             | 13              |
| 1964           | Apr. 21, 1964 | •95              | 11              |
| 1965           | Apr. 22, 1965 | •95              | 7               |
| 1966           | June 1966     | • 59             | 3               |
| 1967           | May 22, 1967  | •84              | 8               |

a About.

f Peak discharge did not reach bottom of gage.

205. Camas Creek near Hamilton, Mont. (12-3458)

Location. -- Lat 46°09', long 114°13', in SW sec. 34, T.5 N., R.21 W., 8 miles southwest of Hamilton.

Drainage area. -- 6.01 sq mi.

Records available .-- April 1958 to

Gage. -- Staff gage installed Apr. 17, 1958. Crest-stage gage installed July 21, 1959. Altitude of gage is 4,000 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1958           | May 20, 1958  | 2.52             | 240             |
| 1959           | June 7, 1959  | 2.30             | 190             |
| 1960           | June 4, 1960  | 2.65             | 265             |
| 1961           | May 28, 1961  | 2.30             | 190             |
| 1962           | June 25, 1962 | 2.06             | 80              |
| 1963           | May 25, 1963  | 2.03             | 74              |
| 1964           | June 26, 1964 | 2.15             | 120             |
| 1965           | June 12, 1965 | 2.39             | 148             |
| 1966           | May 6, 1966   | 2.07             | 102             |
| 1967           | May 22, 1967  | 3.06             | 190             |
|                | -             |                  |                 |

206. Willow Creek near Corvallis, Mont. (12-3485)

Location. -- Lat 46°17'40", long 113°59'40", in SW4NE4 sec.8, T.6 N., R.19 W., 800 ft downstream from Butterfly ranger station, half a mile downstream from Horn ditch, and 6 miles southeast of Corvallis.

Drainage area. -- 22.4 sq mi.

Records available. -- April 1920 to May 1924 (no winter records), September 1957 to December 1965 (continuous record), January 1966 to Gage. -- Wire-weight gage. Crest-stage gage installed July 20, 1959. Altitude of gage is 4,130 ft (from topographic map).

| Annual maximum   | <u>data</u>  |   |  |
|--|--|---|--|
| Water year   | Date   | Gage height (ft)  | Discharge (cfs)  |
| 1920   | June 22, July 2<br>1920  | 1.50  | 60   |
| 1921<br>1922<br>1923<br>1955<br>19661<br>19662<br>19662<br>19663 | June 9, 1921 June 15, 1922 June 26, 1923 May 28, 1958 June 21, 1959 June 3, 1960 May 30, 1961 a June 13, 1962 June 21, 1963 June 17, 1964 June 12, 1965 May 28, 1966 | 2.04<br>2.20<br>2.7560<br>2.560<br>2.560<br>2.670<br>2.87 | 114<br>1302<br>1093<br>1098<br>1098<br>888<br>1048<br>1687 |
| 1967   | June 6, 1967   | 2.06  | 134  |

a About.

d Maximum observed.

207. Gash Creek near Victor, Mont. (12-3502)

Location. -- Lat  $46^{\circ}24^{\circ}$ , long  $114^{\circ}16^{\circ}$ , in  $W_{\overline{2}}$  sec. 32, T.8 N., R.21 W., 5 miles west of Victor.

Drainage area. -- 3.37 sq mi.

Records available .-- July 1958 to

Gage. -- Staff gage installed July 8, 1958. Crest-stage gage installed July 20, 1959. Altitude of gage is 5,500 ft (from topographic

map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u>   | Gage height (ft) | Discharge (cfs) |
| 1958           | May 21, 1958  |                  | a 200           |
| 1959           | June 5, 1959  | 1.58             | 160             |
| 1960           | June 4, 1960  | •75              | 80              |
| 1961           | May 28, 1961  | 1.57             | 99              |
| 1962           | June 25, 1962 | 1.26             | 47              |
| 1963           | June 5, 1963  | 1.19             | a 60            |
| 1964           | June 26, 1964 | 1.36             | 75              |
| 1965           | June 12, 1965 | 1.81             | 165             |
| 1966           | May 28, 1966  | 1.56             | 98              |
| 1967           | June 6, 1967  | 2.02             | 200             |

208. Kootenai Creek near Stevensville, Mont. (12-3505)

Location. --Lat 46°32'30", long 114°10'00", in SW1NW1 sec.18, T.9 N., R.20 W., 3 miles upstream from mouth and 4 miles northwest of Stevensville.

Drainage area. -- 28.9 sq mi.

Records available. -- December 1948 to September 1953, August 1957 to September 1963 (continuous record), October 1963 to

Gage. -- Water-stage recorder. Altitude of gage is 3,780 ft (from topographic map).

| Annual maximum | data                          |                  |                 |
|----------------|-------------------------------|------------------|-----------------|
| Water year     | Date                          | Gage height (ft) | Discharge (cfs) |
| 1948           | May-June 1948                 |                  | 1,250           |
| 1949           | May 16, 1949                  | 5.11             | 980             |
| 1950           | June 17, 1950                 | 5.85             | 1,300           |
| 1951           | June 15, 1951                 | 4.36             | 654             |
| 1952           | June 6, 1952                  | 3.76             | 381             |
| 1953           | June 13, 1953                 | 3.99             | 490             |
| 1958           | May 24, 1958                  | 2.63             | 1,080           |
| 1999           | June 13, 1959                 | 2.39             | 1,020           |
| 1960           | June 16, 1960<br>June 4, 1961 | 2.30             | 87.0            |
| 1962           | June 16, 1962                 | T • 22           | 630             |
| 1963           | June 5, 1963                  | 4.29             | 562             |
| 1964           | June 8, 1964                  | 4.88             | 790             |
| 1965           | June 12. 1965                 | 4.82             | 765             |
| 1966           | May 27, 1966                  | 4.27             | 535             |
| 1967           | June 6, 1967                  | 5.14             | 9 <b>ĭ</b> ó    |

209. Burnt Fork Creek near Stevensville, Mont. (12-3510)

Location. -- Lat 46°27'50", long 113°56'40", in NW4SW4 sec.11, T.8 N., R.19 W., 150 ft upstream from county road bridge and 8 miles southeast of Stevensville.

Drainage area .-- 74.0 sq mi.

Records available. -- May to November 1920, April 1922 to September 1924 (no winter records), April to June 1938, October 1938 to September 1962 (continuous record), October 1962 to

Gage. -- Staff gage. Crest-stage gage installed July 1959. Altitude

of gage is 4,270 ft (from topographic map).

Annual maximum data --

| Annual maximum   | <u>data</u>  |  |  |
|--|--|--|--|
| Annual maximum Water year 1920 1922 1923 19928 19939 19944 19944 19944 19944 19945 19955 19955 19955 19959 19961 19961 19961 | Date June 16, 1920 June 10, 1922 June 19, 1923 May 18, 1924 May 28, 1938 May 4, 1939 May 25, 1940 June 4, 1941 May 26, 1942 June 19, 1943 June 19, 1945 May 28, 1946 May 8, 9, 1947 May 28, 1946 May 8, 9, 1947 May 28, 1951 May 24, 1951 May 26, 1952 June 13, 1953 June 28, 1954 June 15, 1955 May 24, 1956 June 3, 1955 May 24, 1956 June 3, 1956 June 3, 1956 June 3, 1957 June 15, 1960 June 5, 1960 June 5, 1960 | 3.46   | 47068121912339245091310440107132<br>dddddddddddddddddddddddddddddddddddd |
| 1962   | June 4, 1961<br>June 14, 1962<br>June 5, 1963<br>June 8, 1964<br>June 12, 1965<br>May 27, 1966<br>May 23, 1967   | 3.62<br>3.62<br>3.35<br>4.73<br>4.15<br>5.82 |  |

d Maximum observed.

h Maximum daily.

### 210. Eightmile Creek near Florence, Mont. (12-3514)

Location. -- Lat 46°39'10", long 113°57'30", in SW\(\frac{1}{4}\)SW\(\frac{1}{4}\) sec.2, T.10 N., R.19 W., O.6 mile upstream from Granite Creek, 5 miles upstream from mouth, and 6 miles east of Florence.

Drainage area .-- 20.6 sq mi.

Records available. -- September 1957 to September 1963 (continuous record), October 1963 to

Gage. -- Water-stage recorder prior to October 1963. Crest-stage gage installed October 1963. Altitude of gage is 3,800 ft (from topo-

graphic map).
Annual maximum data.--

| Allivat maximum ( | <u>la ua</u> • |                  |                 |
|-------------------|----------------|------------------|-----------------|
| Water year        | <u>Date</u>    | Gage height (ft) | Discharge (cfs) |
| 1958              | May 13, 1958   | 2.72             | 62              |
| 1959              | June 6, 1959   | 2.06             | 33              |
| 1960              | Apr. 10, 1960  | 2.03             | 30              |
| 1961              | May 30, 1961   | 2.19             | 38              |
| 1962              | May 25, 1962   | 2.27             | 36              |
| 1963              | May 26, 1963   | 1.98             | 26              |
| 1964              | June 8, 1964   | 3.60             | 104             |
| 1965              | May 12, 1965   | 3.63             | 75              |
| 1966              | Mar. 27, 1966  | 3.28             | 57              |
| 1967              | June 6, 1967   | 2.89             | 57              |
|                   |                | •                | 7 1             |

## 211. Hayes Creek near Missoula, Mont. (12-3522)

Location. -- Lat 46°49', long 114°06', in center sec.10, T.12 N., R. 20 W., at culvert on U. S. Highways 12 and 93, 2 miles southwest of Missoula.

<u>Drainage area.</u>--4.16 sq mi.

Records available .-- June 1959 to

Gage.--Crest-stage gage installed June 19, 1959. Altitude of gage
is 3,300 ft (from topographic map).

| Annual maximum data                          |      |
|--|------|
| Water year Date Gage height (ft) Discharge ( | efs) |
| 1959 (k) 0.6 3                               |      |
| 1960 Apr. 5, 1960 3.77 56                    |      |
| 1961 May 27, 1961 .70 4                      |      |
| 1962 Apr. 24, 1962 1.34 14                   |      |
| 1963 Mar. 22, 1963 .58 3                     |      |
| 1964 May 22, 1964 1.63 21                    |      |
| 1965 May 12, 1965 2.45 29                    |      |
| 1966 Mar. 30, 1966 .52 2                     |      |
| 1967 Unknow                                  | ı    |

## 212. Nigger Gulch near Alberton, Mont. (12-3534)

Location. -- Lat 47°01', long 114°32', in NW2 sec.33, T.15 N., R.23 W., at culvert on county road, 2.6 miles west of Alberton.

Drainage area. -- 8.02 sq mi.

Records available .-- June 1959 to

Gage. -- Crest-stage gage installed June 19, 1959. Altitude of gage is 3,000 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | <u>Date</u> . | Gage height (ft) | Discharge (cfs) |
| 1959           | (k)           | 0.7              | 23              |
| 1960           | Apr. 6, 1960  | .80              | 27              |
| 1961           | May 2, 1961   | •74              | 24              |
| 1962           | May 29, 1962  | • 54             | 16              |
| 1963           | May 6, 1963   | •59              | 18              |
| 1964           | June 9, 1964  | 1.01             | 67              |
| 1965           | Apr. 28, 1965 | 2.05             | 170             |
| 1966           | Mar. 30, 1966 | •\+5             | 20              |
| 1967           | May 11, 1967  | • 47             | 21              |

## 213. Flat Creek near Superior, Mont. (12-3537)

Location .- Lat 47°13', long 114°53', in NW1 sec. 23, T.17 N. R.26 W., at culvert on county road, 2 miles north of Superior.

Drainage area. -- 13.0 sq mi. Records available. -- July 1959 to May 1961 (discontinued).

Gage. -- Crest-stage gage installed July 3, 1959.

| Annual maximum | <u>data</u>  |                  |                 |
|----------------|--------------|------------------|-----------------|
| Water year     | Date         | Gage height (ft) | Discharge (cfs) |
| 1960           | Apr. 6, 1960 | 0.31             | Unknown         |
| 1961           |              |                  | Unknown         |

214. Thompson Creek near Superior, Mont. (12-3538)

Location. -- Lat 47°12', long 114°55', in SW4 sec.28, T.17 N., R.26 W., la miles west of Superior.

Drainage area. -- 12.2 sq mi.

Records available .-- May 1961 to

Gage. -- Crest-stage gage installed May 15, 1961. Altitude of gage is 2,710 ft (from topographic map).

| Annual maximum | <u>data</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1961           | May 26, 1961  | 0.53             | a 55            |
| 1962           | Apr. 24, 1962 | .82              | 85              |
| 1963           | Apr. 14, 1963 | .15              | 20              |
| 1964           | May 21, 1964  | •53              | 79              |
| 1965           | Apr. 14, 1965 | 3.0              | 190             |
| 1966           | May 4, 1966   | .09              | 54              |
| 1967           | May 22, 1967  | • 57             | 80              |

215. East Fork Timber Creek near Haugan, Mont. (12-3538.5)

Location. -- Lat 47°25', long 115°25', in NE<sup>1</sup>/<sub>4</sub> sec.16, T.19 N., R.30 W., at culvert on county road 2 miles north of Haugan.

Drainage area. -- 2.72 sq mi.

Records available .-- May 1961 to

Gage. -- Crest-stage gage installed May 15, 1961. Altitude of gage is 3,350 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1961           | May 2, 1961   | 0.38             | 23              |
| 1962           | Apr. 15, 1962 | .82              | 45              |
| 1963           | Apr. 14, 1963 | •33              | 20              |
| 1964           | May 22, 1964  | .87              | 7+0             |
| 1965           | Apr. 14, 1965 | 1.46             | 66              |
| 1966           | Apr. 6, 1966  | •48              | .27             |
| 1967           | May 22, 1967  | •67              | 42              |

216. St. Regis River tributary near St. Regis, Mont. (12-3539)

Location. -- Lat 47°19', long 115°13', in NW sec.19, T.18 N., R.28 W., at culvert on Interstate Highway 90 and U. S. Highway 10, 6 miles west of St. Regis.

Drainage area. -- 1.16 sq mi.

Records available .-- July 1959 to May 1961 (discontinued).

Gage. -- Crest-stage gage installed July 3, 1959.
Annual maximum data. --

| THINGT MAXIMUM | <u>aava</u> . |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1959           | (k)           | 0.5              | Unknown         |
| 1960           | May 9, 1960   | .28              | Unknown         |
| 1961           |               |                  | Unknown         |

217. North Fork Little Joe Creek near St. Regis, Mont. (12-3541)

Location. -- Lat 47°16', long 115°09', in SW 25E 2 sec. 34, T.18 N., R.28 W., at bridge on county road, 3 miles southwest of St. Regis.

Drainage area. -- 14.7 sq mi.

Records available .-- July 1959 to

Gage. -- Crest-stage gage installed July 3, 1959. Altitude of gage is 2,850 ft (from topographic map).

| AIIIIUAL MAXIMUM | <u>uata</u>  |                  |                 |
|------------------|--------------|------------------|-----------------|
| Water year       | Date         | Gage height (ft) | Discharge (cfs) |
| 1960             | May 12, 1960 | 1.84             | 179             |
| 1961             | May 26, 1961 | 1.88             | 185             |
| 1962             | May 27, 1962 | 1.16             | 91              |
| 1963             | May 28, 1963 | •95              | 57              |
| 1964             | June 8, 1964 | 1.91             | 212             |
| 1965             | May 29, 1965 | 1.83             | 200             |
| 1966             | May 5, 1966  | 1.60             | 147             |
| 1967             | May 22, 1967 | 1.61             | 195             |
|                  | , , ,        |                  |                 |

## 218. Skyland Creek near Essex, Mont. (12-3560)

Location. -- Lat  $48^{\circ}17'30''$ , long  $113^{\circ}23'10''$ , in  $SE_{4}^{\frac{1}{2}}NW_{4}^{\frac{1}{2}}$  sec. 9, T.29 N., R.14 W., 10 miles northeast of Essex.

Drainage area. -- 8.09 sq mi.

Records available. -- January 1946 to September 1952 (continuous record), 1954, June 1959 to

Gage. -- Water-stage recorder re-installed June 30, 1959, destroyed June 8, 1964. Crest-stage gage installed Sept. 10, 1964. Datum of gage is 4,835.83 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

| Annual maximum | <u>aata</u>   |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1946           | May 28, 1946  | 1.72             | 117             |
| 1947           | May 9, 1947   | 1.84             | 189             |
| 1948           | May 22, 1948  | 2.15             | 284             |
| 1949           | May 16, 1949  | 1.68             | 126             |
| 1950           | June 12. 1950 | 2.46             | 268             |
| 1951           | June 15, 1951 |                  | 179             |
| 1952           | May 15, 1952  | 2.05<br>1.87     | 148             |
| 1954           | May 19, 1954  | 2.3              | 230             |
| 1959           | June 5, 1959  | 2.3              | 189             |
| 1960           | June 3, 1960  | 2.00             | 169             |
| 1961           | May 30, 1961  | 2.48             | 267             |
| 1962           | May 29, 1962  | 1.58             |                 |
| 1963           | June 5, 1963  | 1.52             | 93<br>82        |
| 1964           | June 8, 1964  | 9,55             | 3,580           |
| 1965           | May 29, 1965  | 4.76             | a 120           |
| 1966           | May 26, 1966  | 4.30             | 140             |
| 1967           | June 1967     | (f)              | <100            |
| 1/0/           | 0 4410 1/0/   | (1)              | < T00           |

a About.

f Peak discharge did not reach bottom of gage.

## 219. Moccasin Creek near West Glacier, Mont. (12-3573)

Location. -- Lat 48°29', long 113°51', in SE4 sec.35, T.32 N., R.18 W., at culvert on U. S. Highway 2, 62 miles east of West Glacier.

Drainage area. -- 1.97 sq mi.
Records available. -- June 1959 to

Gage. -- Crest-stage gage installed June 30, 1959. Altitude of gage is 3,300 ft (from topographic map).

| Annual maximum | data          |                  |                 |
|----------------|---------------|------------------|-----------------|
| Water year     | Date          | Gage height (ft) | Discharge (cfs) |
| 1959           | (k)           | 1.3              | 102             |
| 1960           | June 3, 1960  | 1.29             | 120             |
| 1961           | May 27, 1961  | 1.43             | 105             |
| 1962           | mpr. 24, 1962 | 1.17             | 50              |
| 1963           | May 25, 1963  | 1.15             | 48              |
| 1964           | June 8, 1964  | -                | Not determined  |
| 1965           | May 29, 1965  | 5.60             | Not determined  |
| 1966           | May 26, 1966  | 4.11             | Not determined  |
| 1967           | June 6, 1967  | 3.96             | Not determined  |
| , ,            |               |                  |                 |

220. Middle Fork Flathead River tributary at West Glacier, Mont. (12 - 3574)

Location. -- Lat 48°30', long 113°58', in NE4 sec.36, T.32 N., R.19 W., at culvert on U. S. Highway 2, 0.9 mile east of West Glacier.

<u>Drainage area.--0.10 sq mi.</u>
<u>Records available.--</u>June 1959 to

Gage .-- Crest-stage gage installed June 30, 1959. Altitude of gage is 3,250 ft (from topographic map).

Annual maximum data.--

| - |            | - C. C. C C C  |                  |                 |
|---|------------|----------------|------------------|-----------------|
|   | Water year | <u>Date</u>    | Gage height (ft) | Discharge (cfs) |
|   | 1960       | Apr. 3, 1960   | 0.27             | 3               |
|   | 1961       | May 2, 1961    | .19              | 2               |
|   | 1962       | Apr. 23, 1962  | .11              | 1               |
|   | 1963       |                | (f)              | <b>&lt;.</b> 5  |
|   | 1964       | June 8, 1964 . | •32              | a 8             |
|   | 1965       | Apr. 21, 1965  | .49              | 9               |
|   | 1966       | June 4. 1966   | .40              | 6               |
|   | 1967       | June 6, 1967   | •27              | 3               |
|   |            | , , ,          | •                | •               |

a About.

f Peak discharge did not reach bottom of gage.

k Peak flow occurred sometime during period May-June.

## 221. Spring Creek near Stryker, Mont. (12-3638)

Location. -- Lat 48°38', long 114°41', in N2 sec.15, T.33 N., R.24 W., at culvert on U. S. Highway 93, 5 miles southeast of Stryker.

Drainage area. -- 3.86 sq mi.

Records available .-- July 1959 to May 1961 (discontinued).

Gage. -- Crest-stage gage installed July 1, 1959. Altitude of gage is 3,260 ft (from topographic map).

 Annual maximum data.- Mater year
 Date (k)
 Gage height (ft)
 Discharge (cfs)

 1959
 (k)
 0.7
 12

 1960
 June 3, 1960
 -.08
 8

 1961
 May 15, 1961
 .62
 10

## 222. Rock Creek near Olney, Mont. (12-3639)

Location. -- Lat 48°37', long 114°39', in NW sec. 24, T.33 N., R.24 W., at culvert on U. S. Highway 93, 6 miles northwest of Olney. Drainage area. -- 6.18 sq mi.

Records available .-- May 1961 to

Gage. -- Crest-stage gage installed May 16, 1961. Altitude of gage is 3,240 ft (from topographic map).

| Annual maximum | <u>data</u>    |                  |                 |
|----------------|----------------|------------------|-----------------|
| Water year     | <u>Date</u>    | Gage height (ft) | Discharge (cfs) |
| 1961           | e May 15, 1961 | a 1.2            | 214             |
| 1962           | May 21, 1962   | .82              | 13              |
| 1963           | May 14, 1963   | • 56             | 6               |
| 1964           | May 2, 1964    | 1.29             | 25              |
| 1965           | Apr. 28, 1965  | 1.40             | 29              |
| 1966           | June 4, 1966   | • 9,6            | 14              |
| 1967           | May 24, 1967   | • 74             | 13              |

a About.

e Prior to installation of gage.

k Peak flow occurred sometime during period May-June.

## 223. Dayton Creek near Proctor, Mont. (12-3705)

Location. -- Lat 47°55', long  $11^{\frac{1}{4}}$ °20', in  $NW_{\frac{1}{4}}$  sec. 20, T.25 N., R.21 W., at culvert on county road,  $2^{\frac{1}{2}}$  miles northwest of Proctor.

Drainage area. -- 20.9 sq mi.

Records available .-- June 1959 to

Gage. -- Crest-stage gage installed June 18, 1959. Altitude of gage is 3,350 ft (from topographic map).

| Annual maximum | <u>uata</u>   |                  |                        |
|----------------|---------------|------------------|------------------------|
| Water year     | Date          | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1959           | (k)           | 1.3              | 37                     |
| 1960           | May 12, 1960  | 1.7½             | 51                     |
| 1961           | May 27, 1961  | 3.00             | 93                     |
| 1962           | Apr. 24, 1962 | 1.54             | 45                     |
| 1963           | Apr. 13, 1963 | .28              | 7                      |
| 1964           | June 8, 1964  | 1.06             | 29                     |
| 1965           | Apr. 15, 1965 | 5.09             | 131                    |
| 1966           | Mar. 29, 1966 | 1.03             | 28                     |
| 1967           | May 25, 1967  | 2.00             | 60                     |

## 224. Teepee Creek near Polson, Mont. (12-3709)

Location. -- Lat 47°49', long 114°01', in SW sec.23, T.24 N., R.19 W., at culvert on State Highway 35, 11 miles northeast of Polson.

<u>Drainage area.--2.55</u> sq mi. <u>Records available.--June 1959</u> to

Gage.--Crest-stage gage installed June 29, 1959. Altitude of gage is 2,910 ft (from topographic map).

| Annual maximum | <u>aata</u>   |                  |                        |
|----------------|---------------|------------------|------------------------|
| Water year     | Date          | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1960           | June 3, 1960  | 0.48             | 11                     |
| 1961           | June 2, 1961  | .90              | 22                     |
| 1962           | Apr. 24, 1962 | .05              | 7+                     |
| 1963           |               | (f)              | <1                     |
| 1964           | June 8, 1964  | 2.15             | 7+7+                   |
| 1965           | June 12, 1965 | •32              | 8                      |
| 1966           | May 26, 1966  | .18              | 6                      |
| 1967           | June 6, 1967  | •30              | 8                      |

f Peak discharge did not reach bottom of gage.

k Peak flow occurred sometime during period May-June.

### 225. Hell Roaring Creek near Polson, Mont. (12-3711)

Location.--Lat 47°42', long 114°03', in NW½ sec.4, T.22 N., R.19 W., at power house, 5½ miles east of Polson.

Drainage area.--6.41 sq mi.

Annual maximum data .--

Records available .-- May 1917 to September 1932 (continuous record), June 1959 to September 1967 (discontinued). Prior to 1959, published as Big Creek near Polson.

Gage. -- Crest-stage gage installed June 29, 1959. May 1917 to September 1932, water-stage recorder. Altitude of gage is 3,150 ft (by barometer).

| TITIE COLL THE TELESCOPE |  | a /              | m   |
|--------------------------|--|------------------|---|
| <u>Water year</u>        | <u>Date</u>  | Gage height (ft) | Discharge (cfs)                           |
| 1917                     | June 9, 1917   |                  | d 104                                     |
| 1918                     | June 11-14, 191  | .8               | 38  |
| 1919                     | June 9, 1917<br>June 11-14, 191<br>May 27, 1919                                |                  | d 104<br>38<br>69                         |
| 1920                     | May 14, 1920   |                  | 29.4                                      |
| 1921                     | Tuna 7 1021  |                  | 23.3                                      |
| 1922                     | May 20, 1922   |                  | 23·3<br>49                                |
| 1923                     | June 22, 1923  |                  | 29.7                                      |
| 1024                     | May 17 1924  |                  | 27 2                                      |
| 1924<br>1925             | May 22 1925  |                  | 67.0                                      |
| 1926                     | May 20, 1922 June 22, 1923 May 17, 1924 May 22, 1925 May 1, 1926 June 11, 1927 |                  | 29.7<br>27.2<br>61<br>34<br>61            |
| 1927                     | Tuno 11 1027   |                  | 5 <sup>-1</sup>                           |
| 1727                     | Morr 22 1028   |                  | 39.5                                      |
| 1928                     | May 25, 1920   |                  | 37.7                                      |
| 1929                     | May 23, 1928<br>May 25, 1929<br>May 25, 1930                                   |                  | 33.3<br>14.1                              |
| 1930                     | May 25, 1930   |                  | 14.1<br>200                               |
| 1931                     | Dec. 1, 1930<br>Mar. 19, 1932  |                  | h 8.3                                     |
| 1932<br>1948             | Mar. 19, 1932  |                  | h 9.0<br>85<br>60<br>27<br>34<br>12<br>98 |
| 1948                     | May 1948   |                  | 85  |
| 1959                     | e May 1959   | a 1.3            | 60  |
| 1960                     | June 3, 1960   | .81              | 27  |
| 1961                     | June 2, 1961   | •93              | 34  |
| 1962                     | June 3, 1960<br>June 2, 1961<br>Apr. 24, 1962                                  | .49<br>.28       | 12  |
| 1963                     | Apr. 15, 1963  | .28              | 5   |
| 1964                     | June 8, 1964   | 1.73             | 98  |
| 1965                     | June 12, 1965  |                  | a 20                                      |
| 1966                     | Apr. 15, 1963<br>June 8, 1964<br>June 12, 1965<br>March 1966                   | · -1.54<br>-1.34 | 6 (revised)                               |
| 1967                     | June 1967  | -1.34            | 9   |
| -/-/                     |  | _ • • •          | •   |

a About.

d Maximum observed.

e Prior to installation of gage.

h Maximum daily.

## 226. Mill Creek near Niarada, Mont. (12-3743)

Location. -- Lat 47°50', long 114°41', in NE sec. 20, T. 24 N., R. 24 W., at bridge on county road, 3 miles northwest of Niarada.

Drainage area. -- 28.0 sq mi.

Records available .-- June 1959 to

Gage.--Crest-stage gage installed June 18, 1959. Altitude of gage is 3,000 ft (from topographic map).

Annual maximum data.--

| Annual maximum | <u>ua ta </u> |                         |                        |
|----------------|---------------|-------------------------|------------------------|
| Water year     | Date          | <u>Gage height (ft)</u> | <u>Discharge (cfs)</u> |
| 1959           | (k)           | 1.1                     | 90                     |
| 1960           | May 13, 1960  | 1.00                    | 74                     |
| 1961           | May 1, 1961   | 1.42                    | 11+0                   |
| 1962           | Apr. 24, 1962 | •97                     | 70                     |
| 1963           | May 17, 1963  | .78                     | 45                     |
| 1964           | May 27, 1964  | .91                     | 52                     |
| 1965           | Apr. 15, 1965 | 1.43                    | 175                    |
| 1966           | May 12, 1966  | 2.22                    | a 250                  |
| 1967           | May 25, 1967  | 1.40                    | 138                    |
|                | •             |                         |                        |

227. Sullivan Creek tributary near Niarada, Mont. (12-3747)

Location. -- Lat 47°53', long 114°34', in N\frac{1}{2} sec.33, T.25 N., R.23 W., at culvert on county road, 5 miles northeast of Niarada.

Drainage area. --

Records available .-- June 1959 to May 1961 (discontinued).

Gage. -- Crest-stage gage installed June 18, 1959.

| Annual maximum | <u> aata</u> |                  |                        |
|----------------|--------------|------------------|------------------------|
| Water year     | Date         | Gage height (ft) | <u>Discharge (cfs)</u> |
| 1960           | March 1960   |                  | a l                    |
| 1961           |              |                  | Unknown                |

a About.

k Peak flow occurred sometime during period May-June.

228. South Fork Garden Creek near Hot Springs, Mont. (12-3757)

Location. -- Lat 47°39', long 114°43', in SW2 sec.20, T.22 N., R.24 W., at bridge on county road, 3 miles north of Hot Springs.

Drainage area. -- 3.29 sq mi.

Records available .-- June 1959 to

Gage. -- Crest-stage gage installed June 18, 1959. Altitude of gage is 3,300 ft (from topographic map).

Annual maximum data .--Water year Gage height (ft) Discharge (cfs) 1959 (k) a 10 5 1960 April 1960 a 0.86 1961 May 27, 1961 29 14 1962 May 23, 1962 .48 May 17, 1963 24 1963 May 27, 1964 Apr. 29, 1965 a 45 1964 1.02 1965 a 100 Mar. 29, 1966 1966 16 40 May 23, 1967 .16 1967

a About.

k Peak flow occurred sometime during period May-June.

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|--|--|
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| Station Name P.  | age  |
|--|--|
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| Wolf Creek tributary No. 2 near Wolf Point   | 66<br>65                     |
| Wolf Creek, West Fork, near Lustre   | 80                           |
| Yellowstone River tributary near Greycliff Yellowstone River tributary No. 2 near Pompeys Pillar . Yellowstone River tributary No. 3 near Forsyth Yellowstone River tributary No. 4 near Fallon Yellowstone River tributary No. 5 near Marsh | 79<br>84<br>87<br>101<br>101 |

#### EXPLANATION

#### Gaging Stations

7

Crest-stage, in cooperation with Montana State Highway Commission

81

Crest-stage, in cooperation with Montana State Water Resources Board

\_ 5

Recording, in cooperation with Montana State Highway Commission Numbers correspond with numerical listing in station data section Parentheses around numbers mean the station is discontinued

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Drainage divide between principal river basins

6

Part number of geographical division of principal river basin as used in U. S. Geological Survey Water-Supply Papers

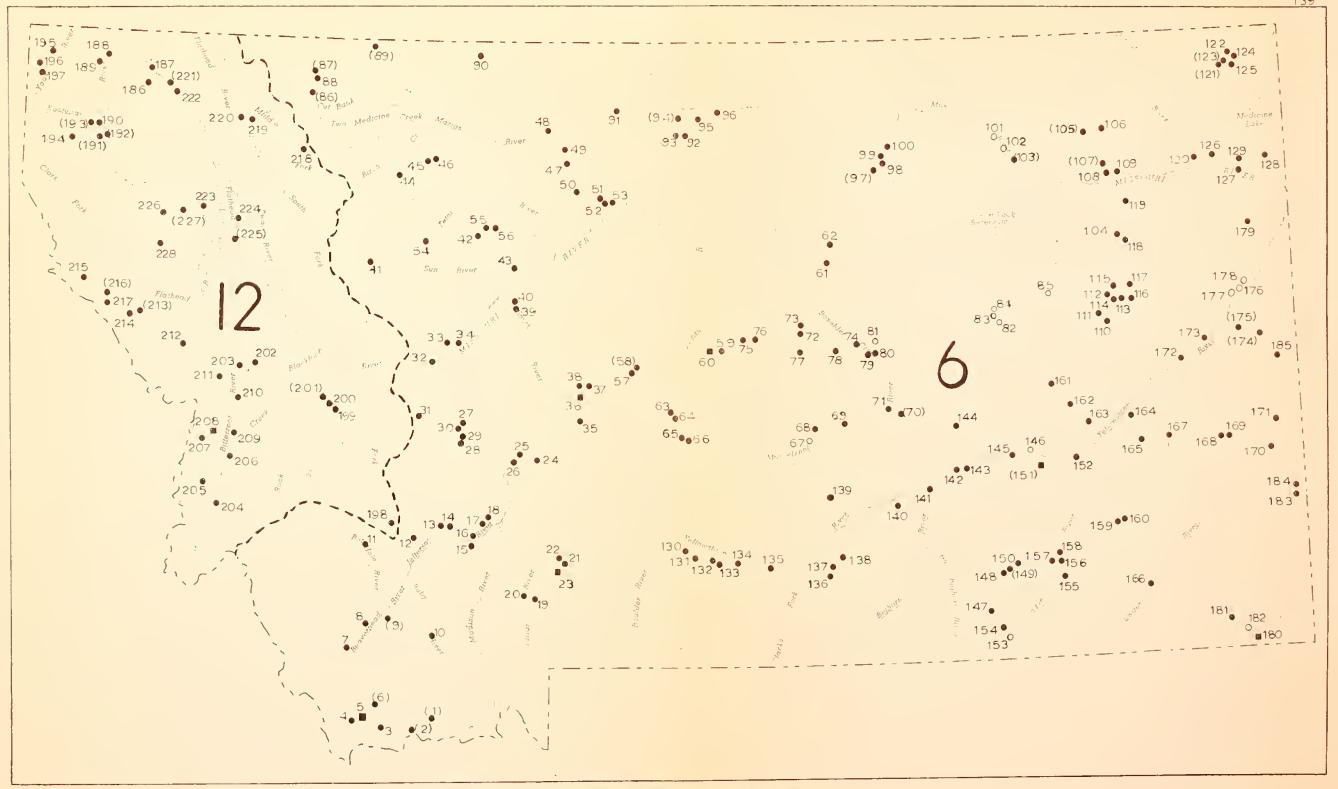


Figure 1 .-- Map showing location of gaging stations.





